University Undergraduate Curriculum Committee Minutes

December 11, 2019 **ADUC 310** **1:30 – 3:30 p.m.**

PLEASE NOTE: All proposals approved by the Undergraduate Curriculum Committee are sent to the Provost for final approval.

Members Present: Dr. Laurie Couch, Dr. Janet Ratliff, Dr. Daryl Privott, Dr. Mark Graves, Dr. Dirk Grupe, Dr. Nilesh Joshi, Dr. Morgan Getchell, Dr. Flint Harrelson, Ms. Pam Colyer (Library for Dr. David Gregory), Mr. Connor Tilford and Mr. Keith Moore

Members Absent: Dr. Sara Lindsey and Ms. Lori Ann Dobson

Guests and Originators: Dr. Timothy Hare (HPIL), Bernadette Barton (SSWC/Gender Studies), Chris Schroeder (MATH), Monica Himes (SSWC), Dianna Murphy (SHSS), Charles Lydeard (BIOC) & Ignacio Birriel (PHES)

ONLINE COMMITTEE ACTIONS:

Minutes:

- ***November 20, 2019***

New Course Proposals:

- ***AGR 351 Emerging Technology in Agriculture***
- ***AGR 461 Remote Sensing and GIS in Agriculture***
- ***BIOL 384 Pathologic Basis of Disease***
- ***MATH ~~310~~ 311 Geometric Algebra***
- ***MATH 360 Tensors/Differential Geometry***
- ***MATH ~~380~~ 385 Mathematics in Business, Industry, and Government*** Change: Course description statement added to indicate that a student can repeat it (Note that the system cannot automatically limit number of times course is taken)
- ***PHYS ~~101~~ 105 Introduction to Physics & Engineering Professions***
- ***PHYS 203 Fundamentals of Physics*** Change: Adjusted section II B. to include all prerequisite options

Major Revision to an Existing Course:

- ***BIOL 447 Organ Systems Physiology*** Change: Include prerequisite in course description, corrected comma splice
- ***BIOL 490 Biochemistry*** Change: minimum of "C" for prerequisite course
- ***EEC 241 Circuit Analysis***

- ***GEO 349 Intro to GIS/Cartography***
- ***GEO 351 Geographical Information Systems***
- ***GEO 353 GIS Application***
- ***GEO 355 Remote Sensing of the Environment***

***Courses will not be equated with corresponding ESS courses until ESS course proposals are submitted/approved.

- ***PHYS 201/201L Elementary Physics I***
- ***PHYS 202/202L Elementary Physics II***
- ***PHYS 231/231L Engineering Physics I***
- ***PHYS 232/232L Engineering Physics II***

***During transition, the laboratory component will be offered crosslisted as "A" and as "L" as necessary to accommodate student needs. This will be managed through advising and the department will work closely with the Registrar's office to manage appropriate adjustments concerning students repeating the course.

Minor Revision to an Existing Course:

- ***AGR 361 Applications in Precision Agriculture***
- ***GST 273 Introduction to Women's Studies***
- ***GST 476 Special Problems in Women's Studies*** Change: Course can be repeated, comma added
- ***GST 490 Integrative Capstone in Women's Studies***
- ***HLTH 301 Health, Safety, and Nutrition for Early Elementary*** Incorrect form
- ***MATH 231 Mathematics for the Elementary Teacher I***
- ***MATH 320 Codes and Cryptography***
- ***PHED 205 Lifetime Fitness*** Incorrect form
- ***PHED 326 Exercise Program Leadership*** Incorrect form
- ***PHED 432 Physiology of Exercise*** Incorrect form

Minor Revision to an Existing Program:

- ***Legal Studies Area BA***
- ***Legal Studies Major BA***
- ***Legal Studies Minor***
- ***Chemical Dependency Counseling Minor***

Course Suspension:

- ***MATH 090 Pre-Algebra***
- ***MATH 091 Beginning Algebra***
- ***MATH 091A Beginning Algebra, Module A***
- ***MATH 091B Beginning Algebra, Module B***

- ***MATH 091C Beginning Algebra, Module C***
- ***MATH 093 Intermediate Algebra***
- ***MATH 093A Intermediate Algebra, Module A***
- ***MATH 093B Intermediate Algebra, Module B***
- ***MATH 093C Intermediate Algebra, Module C***

Program/Minor/Certificate Deletion:

- ***Spanish Major with Teacher Certification (P-12) BA***

OTHER ACTIONS: WITHDRAWN

Major Revision to an Existing Course:

- ***BIOL 336 Pathophysiology***

IN MEETING DISCUSSION/VOTING:

Pulled Proposals and Related Proposals:

PHYSICS:

- ***PHYS 270 Introduction to Scientific Computing – Major Revision Existing Course*** Pulled for Discussion - The requestor (Nilesh Joshi) has requested to discuss the proposal, noting that CS faculty have not had opportunity to address the impact of PHYS 270/PHYS 181 revision. The UG Catalog will include two courses with the same name and CS 270 will continue to state that it equates with PHYS 270 which no longer exists. Dr. Graves made motion to unequate CS 270 and PHYS 270. Dr. Grupe seconded the motion. Mr. Moore stated that if approved, Council Meeting Minutes would suffice as documentation to remove the equation in the 2020-21 UG Catalog. The Council voted and approved. Dr. Joshi reiterated his concern with two courses named the same (Scientific Computing) in the same UG Catalog. Dr. Birriel indicated the PHYS faculty would like to keep the name for PHYS 270. After some discussion, Dr. Couch stated that if the Council approved the course, it was approving having these two courses with the same name. Dirk Grupe moved to approve the proposal. Flint Harrelson seconded. Discussion occurred concerning the overlap of content with CS 270. The committee acknowledged that the duplication/overlap was addressed sufficiently in III.C. of the proposal. The Council voted and approved the proposal.
- ***Physics Area BS – Major Revision Existing Program***
- ***Physics Major BS – Major Revision Existing Program***
  Dr. Grupe made a motion to approve both Area and Major at the same time. Dr. Joshi seconded. Discussion concerning how the transfer pathways would be affected. The Council voted and approved the proposal.

SOCIAL WORK

- ***SWK 394 Introduction to Addictions – New Course*** Pulled for Discussion - The requester (Dr. Harrelson) has requested to discuss the necessity of the course if an existing course (SWK 470) can be used to meet the requirement in the program. Monica Himes explained that SWK

470 has a corequisite of 471 and is part of the Chemical Dependency Counseling minor. SWK 394 is more of a survey course that would be beneficial for a person not planning to do CD minor. Essentially the reason for SWK 394 or 470 was to eliminate duplication for students enrolled in a CD minor. Dr. Graves moved to approved. Dr. Grupe seconded. The Council voted and approved the proposal.

- ***Social Work BSW – Major Revision Existing Program*** Dr. Himes stated the importance of including content on drug addiction in the Social Work curriculum. Dr. Graves moved to approve and Dr. Getchell seconded the motion. The Council voted and approved the proposal.

GENDER STUDIES

- ***GST 397 Social Stratification – Minor Revision Existing Course & SOC 300 Social Stratification – Minor Revision Existing Course*** Pulled for Discussion - The requester (Dr. Grupe) has requested to discuss the course having more than one prefix. Dr. Graves moved to approve these proposals and Dr. Harrelson seconded. The Council votes and approved the proposals.
- ***GST 337 Sociology of Food – New Course & SOC/SWK/CRIM 337 Sociology of Food – Minor Revision Existing course*** Pulled for Discussion - The requester (Dr. Harrelson) has requested to discuss the creation of additional prefixes for existing MSU courses.
- ***GST 355 Sociology of the Body – New Course & SOC/SWK/CRIM 355 Sociology of the Body*** Pulled for Discussion - The requester (Dr. Harrelson) has requested to discuss the creation of additional prefixes for existing MSU courses.

  The council discussed the rationale of offering courses as multiple prefixes (equated). In the case of Gender Studies Minor, all courses already have a GST prefix and the faculty would like to continue doing so to facilitate student registration. Dr. Harrelson reiterated the issues that equated courses cause. Dr. Murphy stated that equations help to manage the curriculum as a whole by helping to identify students. Dr. Harrelson moved to approve 337 proposals and 355 proposals. Dr. Graves seconded. The Council voted and approved the proposals with one no vote.

- ***Gender Studies Minor – Revision of a Minor*** Dr. Barton stated that the proposal was to remove GST 490 as a requirement and add it as an elective. Dr. Grupe moved to approve the proposal and Dr. Getchell seconded. The Council voted and approved.

Major Revision of Existing Program:

- ***Biological Sciences Area BS*** Dr. Lydeard stated that one purpose of the proposal was to facilitate students who were completing dual majors by allowing options for student requirements along. The proposal updates the curriculum to match student demands/career paths while continuing the integrity of the program. Dr. Graves moved to approve the program and Dr. Grupe seconded. Dr. Harrelson identified issues with the totals on the course tables and some typographical errors in part II.A. The Council voted and approved.
- ***Biomedical Sciences Area BS*** Dr. Lydeard stated that the main purpose of the proposal was to facilitate students who were completing dual majors by allowing options for student requirements. Dr. Graves moved to approved. Dr. Grupe seconded. Dr. Harrelson identified

issues with the totals on the course tables and Dr. Lydeard agreed they were errors and would correct. The committee discussed the 50% rule and Dr. Couch stated that exchange courses can be considered as part of the core. The Council approved the proposal.

- ***Convergent Media Area BS*** Dr. Getchell stated that the proposal was to add CVM 205 to the list of electives for the program. Dr. Graves moved to approve and Mr. Tilford seconded. The Council voted and approved the proposal.
- ***Mathematics Area BS*** Drs. Schroeder and Dobranski listed the reasons for the proposal as 1) adding a track to program titled "Data Analytics", 2) adding a second MSUTeach track that will include a computer science teaching endorsement, and 3) moving MATH 175 to the core requirements to assist with meeting the 50% rule. Dr. Grupe moved to approve and Dr. Graves seconded. The Council voted and approved the proposal.

Creation of Minor or Certificate:

- ***Interdisciplinary Research Methods Minor*** Dr. Hare was present on behalf of the originator, Dr. Jim Masterson. He stated that the proposals were a collaborative effort to organize existing research methods courses into a coherent minor (and certificate). Dr. Grupe moved to approve and Dr. Graves seconded. Mr. Moore stated that several of the courses required prerequisites. Dr. Hare agreed that it would be best to alert students. He amended the proposals by adding a statement concerning prequisites to some required and elective courses that would appear in the UG catalog. The Council voted and approved the proposal.
- ***Research and Analytical Skills Certificate*** Dr. Hare stated that students indicated interest in a Certificate as well. Dr. Couch stated that this would be MSU's first UG certificate. Work-ready certificates can only be offered at KCTCS. MSU could offer this certificate because it is not a work-ready certificate and requires upper level courses but it would need to be sent to CPE for approval. Dr. Graves had some procedural and execution questions. He moved to approve the proposal. Dr. Harrelson seconded the motion. Dr. Hare agree to amend the proposal to include the same statement as above concerning course prerequisites. Mr. Moore questioned the availability of certificate to student since in II. A., the proposal states: "a student must have a major and minor on file. Dr. Hare agreed to amend the proposal to state Major or Area on file or have completed a bachelor's degree in order to specify who was eligible to complete the certificate. Mr. Moore questioned when a student completing the requirements would receive the certificate and whether or not a student can earn both a Certificate and a Minor. Dr. Hare agreed to amend the proposals to reflect that a student could not earn both the certificate and a minor and that it would be awarded at graduation for UG students and upon completion for post-baccalaureate students.

OTHER:

Dr. Couch stated the CPE has been in the process of revising the standards for academic programs in the state. In January, the CPE will alert Universities to the changes which possibly include changes to the 50% rule.

Dr. Couch also relayed information from the SACSCOC meeting concerning program outcomes. She stated that several sessions were offered covered this topic and each one included the same plan as what MSU Program personnel are currently completing. She also stated that MSU

personnel were alerted that there is a need for a published policy for University regulations/standards for academic programs. Dr. Couch will be drafting a UAR for this purpose.

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	AGR 351 Emerging Technology in Agriculture
Department: (as listed in current catalog)	Agricultural Sciences Department
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Joyce A. Stubbs / Joyce A. Stubbs (X) Approved ( ) Disapproved 11/12/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GRUPE (X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

Wayne Hill WAYNE MILLER (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Conner (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved 12-12-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	AGR 351 Emerging Technology in Agriculture
Department: (as listed in current catalog)	Agricultural Sciences Department
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☒	If an Information Technology signature is required, it has been obtained.	☑
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☒	The course title, department, and college names correspond to the current catalog.	☑
☒	Course teaching workload, formula, and semesters taught are specified.	☑
☒	The course description EXACTLY matches the course description stated in the syllabus.	☑
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☒	Responses are complete and applicable for each question.	☑
☒	If the course requires the use of live animals, the IACUC form is attached.	☑
☒	The syllabus starts on a separate page.	☑
☒	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☑
☒	The syllabus contains the course title and course number (exactly as listed in the proposal).	☑
☒	The syllabus contains the academic term with date.	☑
☒	The syllabus contains the instructor's name.	☑
☒	The syllabus contains the office location.	☑

☒	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☒	The syllabus contains a grading description and distribution (please be very specific).	☑
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☒	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Jason P. Holcomb Jason P. Holcomb 11/12/2019

Originator (Sign and Print) Approval Date

Patricia L. Harrelson Patricia L. Harrelson 11-12-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

Course Name (as listed in the current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	AGR	351	Emerging Technology in Agriculture	2-2-3	3.47	Fall

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Agricultural Sciences Department

This is a ☐ **required course. This is an** ☒ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

AGR 351. Emerging Technology in Agriculture. (2-2-3) Fall. This course provides an overview of current and emerging technology in agriculture. Topics will include various types of sensors, other computer-based technology, and their respective uses in livestock, horticulture, and field crop production. Prerequisite: AGR 261. Corequisite: AGR 351L.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The goal of this proposal is to build a course foundation for a precision agriculture certificate. This course will expose students to technological advances in agriculture and allow them to explore the field of precision agriculture to determine if they would like to complete a precision agriculture certificate which is currently under development.

B. Justify the proposed instructional level (100-600) or instructional level change.

This course is designed for students who have basic knowledge in agricultural sciences and the academic skills to locate, read, and assimilate information relevant to the topic. This course warrants a 300 level because of the more advanced level of the course topics and the specialized nature of the certificate program.

C. List the student learning outcomes for the course.

Students will be able to
1. Locate current literature about the state of the art in agricultural technology (literature review)
2. Discuss specific precision agriculture technology (class participation or oral presentation)
3. Demonstate a general knowledge of current and emerging agriculture technologies (exams and project)

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

1. Students will complete a literature review and design a project using agricultural technology; scored by a rubric
2. Students will be graded on class discussion or an oral presentation; scored by a rubric
3. Students will complete exams; objective test

E. Define how the course helps students to achieve learning objectives required for the program.

This course will help students achieve the learning objectives required by the Agricultural Sciences Area by improving their communication skills through class discussion or oral presentations, learning about the interaction between physical and biological sciences and the diverse technology employed in agriculture, and gaining an understanding of the various branches of agriculture through exposure to technological advances.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The course will enable students to develop skills in precision agriculture technology that is increasingly used in all areas of agriculture. This is a growing field internationally and these skills are powerful tools that will help graduates compete in the job market. Exploring current and emerging technologies in agriculture will foster inovation and creativity.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

None

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

None

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

None

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Jason Holcomb, Ph.D, Associate Professor of Precision Agriculture/GIS and Geography

B. Identify external adjunct faculty, if appropriate.

None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

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B. Desired implementation date for the course.

Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

Lecture and laboratory

D. Additional facilities and special equipment needs for this course, if any.

The course may include, at the discretion of the instructor, the use of ESRI's ArcGIS Desktop software and Ag Leader's SMS software, which is currently installed and maintained in 300 Lloyd Cassity.

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☒ **Yes** ☐ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☒ **Yes** ☐ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Sample Syllabus
AGR 351 Emerging Technology in Agriculture
MOREHEAD STATE UNIVERSITY
College of Science
Department of Agricultural Sciences

Fall 2020

INSTRUCTOR: Dr. Jason Holcomb
OFFICE: 326 Reed Hall
PHONE: (606) 783-2825
EMAIL: j.holcomb@moreheadstate.edu
OFFICE HOURS: Monday, Wednesday, Friday at 9:00 – 10:00 a.m. and 1:30 – 3:30 p.m.; Tuesday and Thursday, 9:30 – 11:30 a.m. You are welcome to make an appointment or stop by other times, as I am often in my office at times other than those listed.

COURSE DESCRIPTION: AGR 351. Emerging Technology in Agriculture. (2-2-3) Fall. This course provides an overview of current and emerging technology in agriculture. Topics will include various types of sensors, other computer-based technology, and their respective uses in livestock, horticulture, and field crop production. Prerequisite: AGR 261. Corequisite: AGR 351L.

TEXTBOOK: Push Button Agriculture, by Krishna, 2016 and Precision Livestock Farming Applications, by Halachmi, 2015.

ACADEMIC HONESTY
All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

POLICY FOR ACCOMADATING STUDENTS WITH DISABILITIES
In accordance with the Americans with Disabilities Act (ADA), students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at http://www.moreheadstate.edu/disability.

CAMPUS SAFETY STATEMENT
Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at www.moreheadstate.edu/emergency/.

CANCELLATIONS AND DEADLINES STATEMENT
If class is cancelled due to weather (check MSU website) or some other emergency, students are expected to do the chapter learning, class assignments and applicable homework on their own. All assignments for the missed day/s (as well as the ones for that day) will be due the day class resumes. This guarantees that the learning process continues and that all course content is covered during the semester.

ATTENDANCE AND PARTICIPATION
Attendance is required. You are allowed three unexcused absences without penalty, and if you have more than three unexcused absences you will not receive the attendance points. It is important that you do not miss any classes and participate in class discussions and ask questions for clarification. Extraordinary circumstances beyond the student's control will be taken into consideration (i.e., weather), but should be discussed with the instructor. It is each student's responsibility to get course updates and/or assignments for the class session if they are absent. It is each student's responsibility to understand the MSU policies regarding excused absences and completing missed work, which you will find at the following website: https://www.moreheadstate.edu/MSU/media/UARs/UAR-131-05-Excused-Absences-Policy.pdf

STUDENT LEARNING OUTCOMES
Students should be able to: 1. Locate current literature about the state of the art in agricultural technology (literature review) 2. Discuss specific precision agriculture technology (class participation or oral presentation) 3. Demonstrate a general knowledge of current and emerging agricultural technologies (exams). 4. Demonstrate the proper use of agricultural technology in laboratory setting.

Program Competencies	Course Objectives/SLOs	Measures
Locate current literature about the state of the art in agricultural technology (literature review)	Understand and use the concepts underlying contemporary agricultural technology	1. Livestock or Crop Production Technology Project (scored by rubric) 2. Objective exams
Discuss specific precision agriculture technology (class participation or oral presentation)	Demonstrate an understanding of the uses of the latest technology used in different areas of agricultural production	1. Discussion or Oral Presentation (scored by rubric)
Demonstrate a general knowledge and proper use of current and emerging agricultural technologies.	Apply appropriate techniques to real-world agricultural uses	1. Objective exams

GRADE COMPONENTS:

Exams (2)	50 points each
Oral Presentation	50 points
Livestock or Crop Production Technology Project	50 points
Lab Assignments (2)	50 points each
Lab Blackboard Quizzes (5)	50 points each
Attendance	20 points
Final Exam	75 points
Total Points	645 points

GRADING SCALE:
A = 90 - 100% B = 80 - 89% C = 70 - 79% D = 60 - 69% E = 0 - 59 %

Course Outline (Tentative):

Week 1: Syllabus; Introduction and overview of technology in agriculture
Lab: Introduction to precision farming technology in livestock and crop production
Week 2: Livestock overview
Lab: Types of sensors for different animals
Week 3: Livestock Identification; Blackboard Quiz 1
Lab: Animal identification tags, chips, and other sensors
Week 4: Herd management technology
Lab: Tracking animal movement
Week 5: Monitoring Livestock Health; Blackboard Quiz 2
Lab: Sensors that monitor animal health
Week 6: Animal Reproduction and Exam 1
Lab: Animal reproduction sensors; Lab Assignment 1 due
Week 7: Horticulture overview
Lab: Field horticulture technology
Week 8: Horticulture and environment sensors and control
Lab: Greenhouse technology
Week 9: Horticulture and plant monitoring equipment
Lab: Plant health technology
Week 10: Horticulture and labor-saving technology; Blackboard Quiz 3
Lab: Robotics
Week 11: Unmanned Aerial Systems (UAS) and Exam 2
Lab: Introduction to UAS
Week 12: Robotics in field crop production
Lab: Robotics
Week 13: Field Crop overview; Blackboard Quiz 4
Lab: Crop-specific sensors
Week 14: Monitoring crop health
Lab: Sensors that monitor plant health; Lab Assignment 1 due
Week 15: Technology and equipment; Blackboard Quiz 5
Lab: Irrigation technology
Week 16: Crop harvesting
Lab: Yield monitors and Spatial Management Software (SMS) and similar software
Week 17: Final Exam

Please read the following exchange of emails regarding the use of live animals in the proposed AGR 351 course. You will see below that Institutional Animal Care and Use Committee (IACUC) committee member Dr. David Eisenhour stated by email that he and fellow committee member Dr. Amy Staton decided this course does "not require an approved IACUC protocol" because the course activities involving live animals "would fall under umbrella of agricultural livestock not used for research, which does not require AWA/USDA review".

From: Jason Patrick Holcomb <j.holcomb@moreheadstate.edu>
Sent: Wednesday, November 6, 2019 3:33 PM
To: David J. Eisenhour <d.eisenhour@moreheadstate.edu>; Amy J. Staton <a.staton@moreheadstate.edu>
Subject: Course Proposal and IACUC

Hello David and Amy,
I am writing to inform you that I have course proposals working their way through the committees, and in one of them, I must check the box stating that the course will involve the use of live animals. The course proposal under consideration is AGR 361 and the title is Emerging Technology in Agriculture. The way in which it will probably involve animals is that I will introduce students to sensors and other technology used in normal livestock production practices. As I understand it, in situations like this I need a statement from the IACUC but do not need to include the approval form with the course proposal. My department committee must have my updated forms by November 11 at the latest, but I would like to get them to the committee before then if possible. Thank you.
Regards,
Jason
Jason P. Holcomb, Ph.D.
Associate Professor of Precision Agriculture/GIS and Geography

From: David J. Eisenhour <d.eisenhour@moreheadstate.edu>
Sent: Thursday, November 7, 2019 4:08 PM
To: Jason Patrick Holcomb <j.holcomb@moreheadstate.edu>
Cc: Amy J. Staton <a.staton@moreheadstate.edu>; Janet Loretta Cline <jl.cline@moreheadstate.edu>
Subject: RE: Course Proposal and IACUC

Jason,

It is my judgement (and Amy Staton's) that the animals activities you describe do not require an approved IACUC protocol. The activities would fall under umbrella of agricultural livestock not used for research, which does not require AWA/USDA review. "Farm animals, such as domestic cattle, horses, sheep, swine, and goats that are used for traditional, production agricultural purposes are exempt from coverage by the AWA. Traditional production agricultural purposes includes use as food and fiber, for improvement of animal nutrition, breeding, management, or production efficiency, or for improvement of the quality of food or fiber…"

My apologies if my series of questions caused alarm or delay. I have not seen the course proposal was initially unclear of what was happening, and had to track down some documents to be sure of what was covered under IACUC. (I originally was envisioning a surgically-implanted sensor in the rumen kind of thing, and not a routine marking/tracking device similar to ear tags/tattoos). And, now that I think about it, I am not sure that even that level of invasive procedure is relevant to IACUC, if it is something routinely involved in food/meat production.

Hopefully this letter will be enough to keep your course proposal moving forward. Janet and I will work on a more formal letter if something like that is needed. (This is new territory for me).

Best of wishes on your new course.
David

David J. Eisenhour

Professor of Biology

From: Jason Patrick Holcomb <j.holcomb@moreheadstate.edu>
Sent: Monday, November 11, 2019 10:45 AM
To: Gabria W. Sexton <g.sexton@moreheadstate.edu>
Subject: FW: Course Proposal and IACUC

Hi Gabria,
I am working on getting a course proposal approved that would involve use of animals. After several email exchanges, Dr. Eisenhour had this to say about IACUC (see below). His and Amy Staton's view is that this course does not require the IACUC protocol, but I am wondering if the statement below from an IACUC committee member is sufficient to include with the course proposal or if I should get something separate? Thank you.
Jason
Jason P. Holcomb, Ph.D.
Associate Professor of Precision Agriculture/GIS and Geography

From: Gabria W. Sexton <g.sexton@moreheadstate.edu>
Sent: Monday, November 11, 2019 11:49 AM
To: Jason Patrick Holcomb <j.holcomb@moreheadstate.edu>
Subject: RE: Course Proposal and IACUC

Hi Jason. This appears to be sufficient.

Gabria
Gabria W. Sexton, AA
Administrative Assistant to the Associate Provost

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	AGR 361 Applications in Precision Agriculture
Department (as listed in current catalog)	Agricultural Sciences Department
College (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Joyce A. Stubbs (X) Approved ( ) Disapproved 11/13/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRIEPE (X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

Wayne Miller (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

(✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	AGR 361 Applications in Precision Agriculture
Department: (as listed in current catalog)	Agricultural Sciences Department
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☒	The course title, department, and college names correspond to the current catalog.	☑
☒	Course teaching workload, formula, and semesters taught are specified.	☑
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☒	Responses are complete and applicable for each question.	☑
☒	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Jason P. Holcomb — Jason P. Holcomb — 11/12/2019

Originator (Sign and Print) — Approval Date

Patricia L. Harrelson — Patricia L. Harrelson — 11-12-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
Minor Revision to an Existing Course

Use this outline to report a minor modification of a previously approved course and to equate a *current* course with a new course. Minor revisions include title, prefix, course number, catalog course description, and admission requirements (test scores, pre-requisites, or co-requisites). ***Minor changes do not modify course content or the course formula.*** If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

I. COURSE

Current Course Name: (as listed in the current catalog)	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Faculty Load	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
	AGR	361	Applications in Precision Agriculture	3	3-0-3	Spring
Proposed Course Name:	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Faculty Load	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
	AGR	361	Fundamentals of Precision Agriculture	3	3-0-3	Fall

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

The title Fundamentals of Precision Agriculture is more suitable to the content of the course and how this course will relate to the other courses that are soon to be proposed in the ongoing development of a certificate in precision agriculture. This course, AGR 361 is an overview rather than an applied course and it will precede other precision agriculture courses in the proposed certificate program.

B. List all other departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

None

C. Explain the potential impact on the other departments and programs.

None

D. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

None

III. ADDITIONAL INFORMATION

A. If this is a change that effects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

AGR 361 - Fundamentals of Precision Agriculture. (3-0-3) Fall. This course is structured to provide an understanding of the technology available to support precision agriculture and data management planning applications. Topics discussed will include autonomous vehicles, GPS, soil and crop proximal sensors, drones, imagery and mapping, variable rate control systems, and yield monitors. Prerequisite: AGR 261

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	AGR 461 Remote Sensing and GIS in Agriculture
Department: (as listed in current catalog)	Agricultural Sciences Department
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Joyce A. Stubbs / Joyce A. Stubbs (X) Approved ( ) Disapproved 11/13/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GROPE (X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corich (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	AGR 461 Remote Sensing and GIS in Agriculture
Department: (as listed in current catalog)	Agricultural Sciences Department
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☒	If an Information Technology signature is required, it has been obtained.	☑
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☒	The course title, department, and college names correspond to the current catalog.	☑
☒	Course teaching workload, formula, and semesters taught are specified.	☑
☒	The course description EXACTLY matches the course description stated in the syllabus.	☑
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☒	Responses are complete and applicable for each question.	☑
☒	If the course requires the use of live animals, the IACUC form is attached.	☑
☒	The syllabus starts on a separate page.	☑
☒	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☑
☒	The syllabus contains the course title and course number (exactly as listed in the proposal).	☑
☒	The syllabus contains the academic term with date.	☑
☒	The syllabus contains the instructor's name.	☑
☒	The syllabus contains the office location.	☑

☒	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☒	The syllabus contains a grading description and distribution (please be very specific).	☑
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☒	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Jason P. Holcomb — Jason P. Holcomb — 11/12/2019

Originator (Sign and Print) — Approval Date

Patricia L. Harrelson — Patricia L. Harrelson — 11-12-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)						
Proposed Course Name	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
	AGR	461	Remote Sensing and GIS in Agriculture	2-2-3	3.47	Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Agricultural Sciences Department

This is a ☒ **required course. This is an** ☒ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

AGR 461. Remote Sensing and GIS in Agriculture. (2-2-3) Spring. This course will apply remote sensing, geographic information systems (GIS), and unmanned aerial systems (UAS) to agriculture. It utilizes the capabilities of specialized hardware and software to map and analyze data that can then be used to solve problems and enhance decision-making in agriculture. Prerequisite: AGR 361. Corequisite: AGR 461L.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The goal of this proposal is to build a course base for a precision agriculture certificate. This course will provide students with hands-on experience with technology and software for analysis of soils, crops, and production practices. This course will provide a basis for students desiring to work in fields such as agronomic analysis or natural resources conservation.

B. Justify the proposed instructional level (100-600) or instructional level change.

This course is structured to follow Fundamentals of Precision Agriculture, a 300-level course that will provide a basic understanding of the concepts covered more in-depth in this course. Students will work independently with technology such as sensors, drones, and GIS software, thus warranting a 400 level designation.

C. List the student learning outcomes for the course.

Students should be able to:

1. Understand and explain the basic principles of remote sensing and geographic information systems (GIS)
2. Understand and explain the operation of unmanned aerial systems (UAS) and their applications to agriculture
3. Utilize specialized remotely sensed data for agricultural decision-making
4. Apply Geographic Information Systems to agricultural decision-making

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**

2. Students will complete an exam; objective test.

1. Students will complete an exam; objective tests to assess SLOs 1 & 2
2. Students will complete a project analyzing remote sensing data to make agricultural management recommendations; scored by a rubric to assess SLO 3
3. Students will complete a project using ArcGIS software analyzing available data to make agricultural management recommendations; scored by rubric to assess SLO 4.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

Generating recommendations for agricultural decsion making using remote sensing and GIS will help students achieve the program compentency of allowing students to collect, analyze, interpret and present information that is used within the agricultural industry. Learning about the science behind remote sensing and unmanned aerial systems (UAS) and making management recommdendations will involve understanding physical and biological sciences and how these sciences are applicable to the field of agriculture. The remote sensing and GIS projects will require students to develope greater literacy in agronomy, soil science, agricultural economics, and farm management.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

Students educated and trained in the use of this technology will lead to success in a global environment and job market and provide opportunities to engage in scholarship and collaboration with other areas in agriculture and other departments.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

None

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

GEO 355 (equated with ESS 401) is an existing remote sensing course at MSU. I notified Dr. Timothy Hare by phone (783-9436) and email (t.hare@moreheadstate.edu). Dr. Hare is administering coordination among various departments at MSU to teach geographic information systems (GIS) and remote sensing courses. Dr. Hare is in the process of changing course names and descriptions, thus GEO 355 will become GEO 401 if approved by the curriculum committees. GEO349, GEO351, GEO353, and the equivalent courses in ESS are existing GIS courses at MSU. Dr. Hare stated by phone that there will be no conflicts with this proposed AGR 461 course.

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Timothy Hare, Professor of Anthropology, Department of Sociology, Social Work, & Criminology (SSWC) by phone and email.

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Jason Holcomb, Ph.D, Associate Professor of Precision Agriculture/GIS and Geography

B. Identify external adjunct faculty, if appropriate.

None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

15

B. Desired implementation date for the course.

Spring 2021

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
Lecture and laboratory

D. Additional facilities and special equipment needs for this course, if any.
None

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☒ **Yes** ☐ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?
Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ No

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Sample Syllabus
AGR 461: Remote Sensing and GIS in Agriculture
MOREHEAD STATE UNIVERSITY
College of Science
Department of Agricultural Sciences

Spring 2021

INSTRUCTOR: Dr. Jason Holcomb
OFFICE: 326 Reed Hall
PHONE: (606) 783-2825
EMAIL: j.holcomb@moreheadstate.edu
OFFICE HOURS: Monday, Wednesday, Friday at 9:00 – 10:00 a.m. and 1:30 – 3:30 p.m.; Tuesday and Thursday, 9:30 – 11:30 a.m. You are welcome to make an appointment or stop by other times, as I'm often in my office at times other than those listed.

COURSE DESCRIPTION: AGR 461. Remote Sensing and GIS in Agriculture. (2-2-3) Spring. This course will apply remote sensing, geographic information systems (GIS), and unmanned aerial systems (UAS) to agriculture. It utilizes the capabilities of specialized hardware and software to map and analyze data that can then be used to solve problems and enhance decision-making in agriculture. Prerequisite: AGR 361. Corequisite: AGR 461L**.**

TEXTBOOK: Land Surface Remote Sensing in Agriculture and Forest, by Baghdadi and Zribi, 2017

ACADEMIC HONESTY
All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

POLICY FOR ACCOMADATING STUDENTS WITH DISABILITIES
In accordance with the Americans with Disabilities Act (ADA), students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at http://www.moreheadstate.edu/disability.

CAMPUS SAFETY STATEMENT
Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at www.moreheadstate.edu/emergency/.

CANCELLATIONS AND DEADLINES STATEMENT
If class is cancelled due to weather (check MSU website) or some other emergency, students are expected to do the chapter learning, class assignments and applicable homework on their own. All assignments for the missed day/s (as well as the ones for that day) will be due the day class resumes. This guarantees that the learning process continues and that all course content is covered during the semester.

ATTENDANCE AND PARTICIPATION
Attendance is required. You are allowed three unexcused absences without penalty, and if you have more than

three unexcused absences you will not receive the attendance points. It is important that you do not miss any classes and participate in class discussions and ask questions for clarification. Extraordinary circumstances beyond the student's control will be taken into consideration (i.e., weather), but should be discussed with the instructor. It is each student's responsibility to get course updates and/or assignments for the class session if they are absent. It is each student's responsibility to understand the MSU policies regarding excused absences and completing missed work, which you will find at the following website: https://www.moreheadstate.edu/MSU/media/UARs/UAR-131-05-Excused-Absences-Policy.pdf

STUDENT LEARNING OUTCOMES

Students should be able to:

1. Understand and explain the basic principles of remote sensing and geographic information systems (GIS) (exam)
2. Understand and explain the operation of unmanned aerial systems (UAS) and their applications to agriculture (exam and laboratory exercise)
3. Utilize specialized remotely sensed data for agricultural decision-making (laboratory remote sensing project)
4. Apply Geographic Information Systems to agricultural decision-making (GIS project)

Program Competencies	**Course Objectives/SLOs**	**Measures**
Understand and explain the basic principles of remote sensing and geographic information systems (GIS)	Understand and use the concepts underlying the use of remote sensing hardware and GIS software in agriculture	Objective exam
Understand and explain the operation of unmanned aerial systems (UAS) and their applications to agriculture	Understand and use the concepts underlying the use of UAS in agriculture	Objective exam; laboratory exercise
Utilize specialized remotely sensed data for agricultural decision-making	Apply appropriate techniques to real-world subjects in agriculture	Laboratory Remote Sensing Project (scored by rubric)
Apply geographic information systems data and software (GIS) to agricultural decision-making	Apply appropriate techniques to real-world subjects in agriculture	Lab GIS project (scored by rubric)

GRADE COMPONENTS

Exams (2)	50 points each
Remote Sensing Lab Project	50 points
GIS Lab Project	50 points
UAS Lab Exercise	50 points
Attendance	25 points
Final Exam	75 points
Total Points	350 points

GRADING SCALE
A = 90 - 100% B = 80 - 89% C = 70 - 79% D = 60 - 69% E = 0 - 59 %

Course Outline (Tentative):

Week 1: Syllabus; Introduction and overview of course
Lab: Introduction to remote sensing and GIS software
Week 2: The electromagnetic spectrum and other science behind remote sensing
Lab: Satellites, airplanes, drones, and their sensors
Week 3: Soil mapping using optical visible and near infrared remote sensing
Lab: Soils and the spectral characteristics
Week 4: Estimation of biophysical variables from satellite observations
Lab: Biophysical spectral characteristics and their uses
Week 5: Remote sensing software and Exam 1
Lab: Remote sensing applications of ArcGIS
Week 6: Land cover mapping from optical images
Lab: Remote sensing applications of ArcGIS
Week 7: Crop and Moisture monitoring with remote sensing
Lab: Drones and remote sensing; remote sensing lab project due
Week 8: Basic principles of GIS
Lab: Using ArcGIS software
Week 9: Basic principles of GIS (cont.)
Lab: Using ArcGIS software
Week 10: Data management and analysis in GIS
Lab: Using ArcGIS software
Week 11: GIS in agricultural decision-making
Lab: SMS software
Week 12: GIS in agricultural decision-making and Exam 2
Lab: SMS software; GIS lab project due
Week 13: Basic principles of Unmanned Aerial Systems
Lab: Drone parts and assembling a drone for flight
Week 14: Drone piloting
Lab: Regulations and laws regarding drones; how to pilot a drone
Week 15: UAS applications in agriculture
Lab: Drone sensors
Week 16: UAS applications in agriculture (cont.)
Lab: How to pilot a drone; UAS lab exercise due
Week 17: Final Exam

Please insert (paste) any supporting documentation (email correspondence, IACUC form, etc.) here and remove this statement.

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	BIOL 384 Pathologic Basis of Disease (3-0-3)
Department: (as listed in current catalog)	Biology and Chemistry
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Charles Lynch (X) Approved ( ) Disapproved 10/31/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK BUFE (X) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) — Date

Wayne Miller (X) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Dept. Kurt Gibbs (X) Approved ( ) Disapproved 10/31/19

Undergraduate Curriculum Committee (Sign and Print) — Date

Laurie Couch 12/11/19

( ) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	BIOL 384 Pathologic Basis of Disease (3-0-3)
Department: (as listed in current catalog)	Biology and Chemistry
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☑	If an Information Technology signature is required, it has been obtained.	☐
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☑	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The course description EXACTLY matches the course description stated in the syllabus.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	If the course requires the use of live animals, the IACUC form is attached.	☐
☐	The syllabus starts on a separate page.	☐
☑	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☐
☐	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☐	The syllabus contains the academic term with date.	☐
☑	The syllabus contains the instructor's name.	☐
☑	The syllabus contains the office location.	☐

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☐	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☐
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☐	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Approval Date: 10/31/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date: 10/31/19

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

Course Name (as listed in the current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	BIOL	384	Pathologic Basis of Disease	3-0-3	3	Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

This is a ☐ **required course. This is an** ☒ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

BIOL 384. Pathologic Basis of Disease. (3-0-3). Spring. Emphasis placed on understanding descriptive evidence associated with immunology, organ system physiology and altered cellular biology. Student focus will be placed on disrupted physiological mechanisms and their role in disease development and patient suffering, providing a bridge between basic and clinic science. BIOL 245/245A & BIOL 380 are prerequisites.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

Currently students in the Department of Biology & Chemistry take BIOL 336 Pathophysiology. These students will no longer take that course because it will be stricly for Nursing students and taught only online. Students majoring in Biomedical Science, Biology, Veterinary Sciences & Chemistry will take BIOL 384 Pathologic Basis of Disease as an elective only.

B. Justify the proposed instructional level (100-600) or instructional level change.

This course is designed for junior & senior Biomedical, Biology, Chemistry and Veterinary Sciences majors. BIOL 384 is an elective course that requires a number of prerequisties at the 100, 200 and 300 level all below the designated course number. Specificly BIOL 380 Cell Biology will be a prerequesitie requiring the course number for Pathologic Basis of Disease to be greater than 380.

C. List the student learning outcomes for the course.

This course will focus on understanding the alterations in physiological mechanisms which occur in relation to disease development and provide a bridge between the basic and clinical sciences forcing the student to use critical thinking skills to solve problems related to the treatment/management and pathogenesis of disease.

Students will be expected to:
1. Use thinking, writing & math skills to evaluate, interpret, & solve pathophysiological problems;

2. Use their understanding of chemical, molecular and cellular activity with regard to alterations in homeostasis so they may critically evaluate what they read/observe in human disease; and

3. Use their understanding of the pathogenesis of disease to interpret information & solve problems related to the rationale/mechanisms involved in treatment/management (including pharmacology) and pathogenesis of diseases.

Competencies will be gained in the following:
1. An understanding of cellular adaptations, injury, manifestations and death.
2. Transmission of genetic diseases.
3. Epigenetics & Cancer.
4. Cancer terminology, characteristics and manifestations.
5. A through understanding of both the innate and adapative immune systems and alterations in function.
6. The role fluids, elecrtrolytes and acid base balance play in pathologic processes.
7. An understanding of alterations in hormonal regulation in the hypothalmus, pituitary, thyroid, pancreas and adrenals.
8. Understanding the difference between RBC & WBC dysfunction.
9. Understanding the difference between leukemia and lymphona.
10. Analysis of diseases of arteries, veins and the heart wall.
11. Understanding the difference between restrictrive and obstructive lung disease.
12. The ability to compare and contrast acute and chronic kidney disease.
13. Understanding female/male sexual maturation alterations and sexually transmitted diseases.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity.

For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

1. Assessment of a student's ability to critically think through processes as they are presented. Students will be evaluated by their responses to specific questions which rely heavily on problem solving abilities and the use of case study pedagogical methods during lectures throughout the semester.

2. Student comprehension of course content will also be assessed by means of a number of quizzes and five regularly spaced exams throughout the semester. These exams will not focus on gross memorization but challenge the student's ability to effectively assimilate the course information and critically work through technical exam questions.

E. Define how the course helps students to achieve learning objectives required for the program.

Mastery of the course content in Pathologic Basis of Disease is fundamental to the training of all healthcare specialists and individuals interested in exploring careers in any field of biomedical science. The view of the human body as a machine whose mechanisms of action can be explained by cause and effect relationships and what happens when these relationships are disrupted. This expectation requires the student to analytically process information via the scientific method through both mechanistic and teleological approaches. The result will be a thorough understanding of how a disease state can develop and manifest itself from a molecular, cellular and organ system perspective.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The course relates to the mission of the University by preparing students in Biomedical, Biology, Chemistry and Veterinery Science programs by providing quality instruction at the undergraduate level. BIOL 384 is an elective course in the Biomedical, Biology, Veterinary Sciences and Chemisty programs for students interested in gaining admission to healthcare/veterinary related professional schools or PhD programs following graduation.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

BIOL 384 seperates the Biomedical Sciences students from the Nursing students taking BIOL 336. We have taught both populations together for an extended time in BIOL 336 but with the necessity of Nursing wanting access to online instruction it is the perfect time and in the best interest of both student populations to separate them with courses geared more to their academic backgrounds.

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

BIOL 384 does not duplicate nor overlap with any other existing courses offered in the Biology and Chemistry Department at MSU.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Biol 384 is taken for program credit by students in the Department of Biology & Chemistry majoring in Biomedial Sciences, Biology & Chemistry. Students in the Veterinary Sciences Program can also potentially select this course as one of their Science Electives.

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

I am submitting this proposal at the request of Dr. Charles Lydeard the Chair of the Department of Biology & Chemistry. With a Departmental initiative to reduce all 4 hour strictly lecture courses to 3 hour lecture courses and the Nursing Department wanting access solely to an online version of Pathophysiology, this is the perfect time to create a course focused on the mechanism of disease development just for students majoring in the Biomedical Sciences, Biology, Veterinary Sceinces and Chemistry worth 3 credit hours. I have discussed the development of this course with both Dr. Phil Prater (Veterinary Sceinces) and Dr. Mark Blankenbueler (Chemistry) by phone and the potential of their students taking this course as an upper-level BIOL elective in their respective programs.

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Dr. Darrin DeMoss, Ph.D., Professor of Biology. Specialty: Human/Animal Physiology

Dr. Elizabeth Lin, Ph.D., Visiting Assistant Professor of Biology. Specialty: Pharmacology

B. Identify external adjunct faculty, if appropriate.

NA

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

30-50 depending on interest among junior & senior Biomedical Science, Biology, Veterinary Science and Chemistry undergraduates.

B. Desired implementation date for the course.

Spring 2021

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

Lecture

D. Additional facilities and special equipment needs for this course, if any.

No additional facilities or equipment are needed

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

MOREHEAD STATE UNIVERSITY
COLLEGE OF SCIENCE
DEPARTMENT OF BIOLOGY AND CHEMISTRY

Pathologic Basis of Disease (BIOL 384)

Course Syllabus
Spring 2021

CATALOG DESCRIPTION: **BIOL 384. Pathologic Basis of Disease. (3-0-3). Spring.** Emphasis placed on understanding descriptive evidence associated with immunology, organ system physiology and altered cellular biology. Student focus will be placed on disrupted physiological mechanisms and their role in disease development and patient suffering, providing a bridge between basic and clinic science.

COURSE ORGANIZATION: Section 001: Lectures TTH 1:00-2:15 in Lappin Hall 213

PREREQUISITES: BIOL 245/245A and BIOL 380

INSTRUCTOR:
Dr. Darrin DeMoss, Ph.D.
Office: 327H Lappin Hall
Office Phone: (606) 783-5388
da.demoss@moreheadsstate.edu
Office hours: *To be Announced / By Appointment*

REQUIRED TEXT: *Pathophysiology: The Biological Basis for Disease in Adults and Children* ***8***th *Edition* by McCance and Huether, Elsevier, 2018.

ISBN # 9780323583473

i>Clicker2: i>Clicker2 is a response system that will be used for the quizzing component of this course. Thus, you will need to purchase the device and register it immediately. To register your clicker go to www.iclicker.com/registration and complete the fields with your first name, last name, student ID, and remote ID. Or simply go to my BlackBoard select Tools, select iClicker Registration and just enter your remote ID. Your student ID starts with the letter m (Example m0443767) while the remote ID is the series of numbers and sometimes letters found on the bottom back of your i>clicker2 remote. It is your responsibility to remember to bring your clicker to class and to make sure that it is functioning.

COURSE PHILOSOPHY: This course will focus on understanding the alterations in physiological mechanisms which occur in relation to disease development and provide a bridge between the basic and clinical sciences forcing the student to use critical thinking skills to solve problems related to the treatment/management and pathogenesis of disease.

Students will be expected to:

1. Use thinking, writing & math skills to evaluate, interpret, & solve pathophysiological problems;

2. Use their understanding of chemical/molecular and cellular activity in regard to alterations in homeostasis so they may evaluate what they read and observe in regard to human disease; and

3. Use their understanding of the pathogenesis of disease to interpret information & solve problems related to the rationale/mechanisms involved in treatment/management (including pharmacology) and pathogenesis of diseases.

BIOMEDICAL SCIENCES PROGRAM COMPETENCIES: Students graduating with the Bachelor of Science degree in Biomedical Sciences should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is both qualitative and quantitative.

2. A general competency in the physical sciences, including basic inorganic and organic chemistry, as well as introductory physics, mathematics and statistics.

3. An understanding of literacy of the disciplines of biology related to biomedicine, including cell biology, physiology, biochemistry, molecular biology, microbiology and genetics.

4. An understanding of the interdisciplinary nature of biomedical sciences and science in general.

5. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences, biological sciences and physical sciences to the human community.

BIOL 384 Pathologic Basis of Disease will address program competencies 3, 4 and 5.

BIOLOGICAL SCIENCES PROGRAM COMPETENCIES: Students graduating with the Bachelor of Science degree in Biology should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is both qualitative and quantitative.

2. An awareness of the basic concepts of the physical and biological sciences and how these concepts are applicable in the profession.

3. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences as well as the biological and physical sciences to the human community.

4. A basic understanding of literacy of all disciplines of biology, from molecular to cellular to organismal to populations levels that unite organismal, continuity, diversity and unity of life.

5. A general competency in basic inorganic and organic chemistry as well as in introductory physics, mathematics and statics.

BIOL 384 Pathologic Basis of Disease will address program competencies 2, 3 and 4.

"COMMUNITY ENGAGEMENT: A Light to and from the Mountains"
The Professional Education Unit at Morehead State University delivers rigorous, high quality programs that prepare professionals informed by the best national and international scholarship, research, literature, and experiences specific to Appalachia, thus preparing professionals to improve the schools, quality of life, and the communities in which they live and serve. This statement is not only the strategic mission for the College, but it also incorporates the conceptual framework that guides all our activities.

ATTENDANCE POLICY: There is a strong correlation between class attendance and success in Biology Courses; therefore, attendance to all lectures is critical and you are expected to attend. A student with a valid, documented university excuse (such as for illness/injury, military service, death in the family, or university-sponsored activity, etc…. as outlined in University Administrative Regulation 131.05 (UAR 131.05)) should **promptly notify Dr. DeMoss** in order to make up the material missed. Students are expected to prepare themselves for each lecture session by reading any related material prior to attending the lectures. Please do not be late because it puts you at a disadvantage and can easily disrupt the instructor and your peers. If your absence is an extended please contact **Mr. Max Ammons,** the Dean of Students, 109B Enrollment Services Center, (606) 783-2070 should be notified.

AMERICANS WITH DISABILITIES ACT (ADA): Students with disabilities are entitled to academic accommodations and services to support their access and safety. The Office for Disability Services in 109-J Enrollment Services Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact **Mrs. Evangeline Day**, Disability Services, 109J Enrollment Services Center, at (606) 783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.

CAMPUS SAFETY STATEMENT: Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at http://www.moreheadstate.edu/emergency.

USE OF TECHNOLOGY: Students will be expected to use the internet, e-mail, word processing, and any other appropriate software needed to complete assignments.

ADD/DROP: The last date to register for a class is **Tuesday, January 22nd** and the last date to drop this class with a grade of "**W"** is **Friday April 5th.**

EXAMINATIONS: A student with a valid excuse according to UAR 131.05 (verification required) for missing an exam should notify **Dr. DeMoss, beforehand if possible,** in order to schedule a make-up examination within one week following return to class. If your absence is going to be an extended one, it is

recommended that the **Dean of Students, Mr. Max Ammons,** contacted. An exam missed without an acceptable excuse will be recorded as a **Zero**. All exams will be available for review for one week after the exam grades are returned. Students may review exams in **Dr. DeMoss's Office 327H Lappin Hall** or during the scheduled tutor session.

Program competencies 3, 4 and 5 will be addressed using exams periodically throughout the semester as the physiological content is covered.

QUIZZES: A number of quizzes worth varying point vales will be given and **cannot** be made up; they can however be taken in advance of your absence if your excuse for missing class is designated acceptable by the institution and more importantly, I have it prepared. If unable to take the quiz prior to missing the quiz a fair and equitable way to make-up the quiz will be agreed upon by the Dr. DeMoss and the student. Every quiz given will be counted until your total quiz score reaches a **maximum of 100 points**. Quizzes will be given at the start of class so being on time is critical. Quizzes will be either visual/matching or multiple choice or some combination thereof and they require the use of your i>clicker2.

Program competencies 3, 4 and 5 will be addressed using quizzes periodically throughout the semester as the physiological content is covered.

GRADING POLICY: Grades will be assigned on a % basis of 600 points.

Exam I	**100%pts**
Exam II	**100%pts**
Exam III	**100%pts**
Exam IV	**100%pts**
Exam V	**100%pts**
Quizzes	**100pts**
	600pts

GRADING SCALE:

A = 90-100%	**(537 - 600pts)**
B = 80-89%	**(477 - 536pts)**
C = 70-79%	**(417 - 476pts)**
D = 60-69%	**(357 - 416pts)**
E ≤ 59%	**(≤ 357pts)**

TUTOR SESSION: Their will be no regularly scheduled tutor session for Dr. DeMoss's BIOL 336/685, Pathophysiology, Section 001 however if requested by the class a tutor session will be scheduled as we approach each exam. Additional tutoring may be received by making an appointment or through the Learning Lab in 208 Allie Young Hall (783-5200).

CLASSROOM BEHAVIOR:

Academic Dishonesty: Plagiarism or cheating in any form will not be tolerated and will be dealt with in accordance with the EAGLE: Student Handbook and the University Undergraduate Catalog. Academic dishonesty, as defined by the University, occurs when you do not do your own work, fail to give credit for the work of others, or use resources inappropriately.

Consistent Tardiness is not acceptable. You are expected to be in your seat and ready for class prior to 3:00 (Section 001) for every class session unless Lappin Hall 213 is locked.

Cell Phones (including Blackberry's and iphones), Walkie Talkie's, PDA's, and Beepers must be shut off upon entering the classroom. **This means NO TEXTING!!!** MP3 Players, iPOD's or any other device requiring the use of headphones are not permitted during class. If I observe the use of any of these devices, I will collect the device and you can pick it up immediately following class, following your second offense you will be excused from class and you will have to schedule an appointment with me in order to return to class. The appearance of any of these devices during an exam will result in the collection of the device, failure of the exam and potentially the course following a meeting with the Dean of Students.

Laptops and Tape recorders are welcome but must be kept at your desk. It is a safety issue to have power cords running across the floor (It is your responsibility to have a fully charged battery). If I discover that you are doing anything other than course related material on your laptop during class, I will collect your computer and you can pick it up immediately following class, following your second offense you will lose your privilege to bring your laptop back to class.

Anyone caught with a cell phone out while taking/reviewing an exam will have it confiscated immediately given a **ZERO** for the Quiz/Exam and sent immediately to visit the Dean of Students if the fraction involved an exam.

Pathologic Basis of Disease
BIOL 384, Section 001
Dr. DeMoss

Lecture Syllabus, Spring 2021

January	
15	**Introduction to Pathophysiology & Homeostasis**
17	**Altered Cellular & Tissue Biology**
22	**Altered Cellular & Tissue Biology**
24	**Genes & Genetic Diseases**
29	**Epigenetics & Disease**
31	**Innate Immunity**
February	
5	**Exam I**
7	**Innate Immunity**
12	**Adaptive Immunity**
14	**Adaptive Immunity**
19	**Infection & Defects in Mechanisms of Defense**
21	**Stress & Disease**
26	**Exam II**
28	**Biology of Cancer**
March	
5	**Biology of Cancer**
7	**Fluids & Electrolytes Alterations**
12	**Acid/Base Disruption**
14	**Exam III**

18-22	**Spring Break**
26	**Alterations in Hematologic Function**
28	**Alterations in Hematologic Function**

April

2	**Alterations in Hormonal Regulation**
4	**Alterations in Cardiovascular Function**
9	**Alterations in Cardiovascular Function**
11	**Alterations in Pulmonary Function**
16	**Exam IV**
18	**Alterations in Pulmonary Function**
23	**Alterations in Urinary Function**
25	**Alterations in Urinary Function**
30	**Alterations in Female Reproductive Function**

May

2	**Alterations in Male Reproductive Function**
7	**EXAM V (Tuesday May 7th, 10:15-12:15)**

***** Any significant changes to the syllabus will be announced/discussed during scheduled class time. *****

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	BIOL 447 Organ Systems Physiology
Department: (as listed in current catalog)	Biology and Chemistry
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Charles Lydeard (✓) Approved ( ) Disapproved 10/3/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GAUTE (✓) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) Date

WAYNE MICEK (✓) Approved ( ) Disapproved 11/13/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Dept. Kurt Gibbs (✓) Approved ( ) Disapproved 10/31/19

Undergraduate Curriculum Committee (Sign and Print) Laurie Couch Date 12/11/19

( ) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	BIOL 447 Organ Systems Physiology
Department: (as listed in current catalog)	Biology and Chemistry
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If an Information Technology signature is required, it has been obtained.	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The course title, department, and college names correspond to the current catalog.	☑
☑	Course teaching workload, formula, and semesters taught are specified.	☑
☑	The course description EXACTLY matches the course description stated in the syllabus.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☑	Responses are complete and applicable for each question.	☑
☑	If the course requires the use of live animals, the IACUC form is attached.	☑
☑	The syllabus starts on a separate page.	☑
☑	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☑
☑	The syllabus contains the course title and course number (exactly as listed in the proposal).	☑
☑	The syllabus contains the academic term with date.	☑
☑	The syllabus contains the instructor's name.	☑
☑	The syllabus contains the office location.	☑

☑	The syllabus contains the instructor's office phone number and office hours schedule.
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.
☑	The syllabus contains a grading description and distribution (please be very specific).
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.
☑	The entire proposal is saved as one Word document.

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Approval Date: 10/31/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date: 10/31/19

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ **New Course** ☒ **Revised Course**

Course Name (as listed in the current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	BIOL	447	Organ Systems Physiology	4-0-4	4	Fall
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	BIOL	447	Organ Systems Physiology	3-0-3	3	Fall

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

This is a ☐ **required course. This is an** ☒ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

BIOL 447. Organ Systems Physiology. (3-0-3) Fall. Specific focus on three integrating themes: the interrelationships of human organ systems, homeostasis and the complementing relationship of structure and function. Homeostatic regulatory mechanisms between interactive organ systems will be continually emphasized, as well as how the body meets its changing demands during the onset of various pathological conditions. BIOL 245/245A & BIOL 301/CHEM 301 are prerequisites.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

Departmental initiative to reduce all 4 hour lecture courses to 3 hour lecture courses. The revison is stricly a reduction in content delivered to students.

B. Justify the proposed instructional level (100-600) or instructional level change.

This course is designed for junior & senior Biomedical and Biology majors. No change in instructional level is needed, BIOL 447 is an elective course that requires a number of prerequisites at the 100, 200 and 300 level. BIOL 447 can also potentially be taken as an elective in the Veterinary Sciences and Chemistry Programs.

C. List the student learning outcomes for the course.

Simply stated, physiology is the study of function. Function occurs at three levels: molecular, subcellular, and cellular. Events at these levels in turn determine the activities of tissues, organs, and systems. An understanding at each level is necessary to appreciate the overall function or dysfunction of an individual. The study of physiology can be divided into two general categories of information: processes and regulation. Or to put it another way, how does the body do what it does? And how are these activities controlled to optimally benefit the individual? For example, how does the kidney produce urine? And, how is this process regulated so that the volume and salt content of that urine are matched to the salt and water intake of the individual and the loss of salt and water via other processes such as respiration and sweating?

The first portion of the course introduces the concept of homeostasis and the movement of water, electrolytes, and organic material across the cell membrane. Next the general physiology of excitable membranes is presented. Nerve conduction and synapses are presented along with discussions of skeletal and smooth muscle physiology. This section also introduces the two major regulatory systems of the body: the Endocrine and Nervous systems. These provide the background necessary to understand the regulation of the various organ systems. The next sections consider the physiology of the cardiovascular, respiratory, renal, and gastrointestinal systems. The understanding of the functions of these systems is necessary to appreciate a significant portion of endocrine control, which is left for the final section. Thus, this final section focuses on a significant amount of integrated physiology.

This course will focus on the mechanisms of body function from cells to systems and is organized around the central theme of homeostasis (how the body meets changing demands while maintaining the internal constancy necessary for all cells and organs to function). The principles presented throughout the semester are the foundation of medicine, and the ability to work with them in countless clinical situations is essential to the practice of medicine. In order to help the student, ascertain that he or she is assimilating the material, exams will be given periodically throughout the semester. These exams will serve to identify important concepts and to illustrate depth of understanding required to utilize the principles and theories of human physiology.

Students will be expected to:
1. Use thinking, writing & math skills to evaluate, interpret, & solve physiological problems;

2. Use their understanding of chemical/molecular and cellular biology to evaluate how homeostasis maintains the internal environment within a specified range under normal conditions for any organ-system; and

3. Use their understanding of the physiology to interpret information associated with one organ-system and predict the impact on the homeostasis of other organ-systems in order to gain insight to the pathologic basis of disease.

Nervous System
1. Explain the organization of the nervous system and the major function of structures in the CNS.
2. Compare and contrast the functions of the sympathetic & parasympathetic divisions of the autonomic nervous system.
3. Compare and contrast nerve impulse transmission in myelinated and unmyelinated nerves.
4. Explain how nerve impulses cross a synpase and regulate body cells.
5. Compare and contrast various neuortransmitters, noting their sources, functions and mode of inactivation.
6. Understand the mechanism of sensory structure activation and integration.

Musculoskeletal System
1. Explain the arrangement of actin and myosin filaments and their function in skeletal muscle contraction.
2. Describe the energy sources for muscle contraction and explain how muscular activity can cause oxygen debt.
3. Compare and contrast the various skeletal muscle fiber types.
4. Describe nerve impulse trasnsmission across trhe neuromuscular junction.

Respiratory System
1. Explain how the partial pressure of gas relates to its concentration in a gas mixture.
2. Explain how oxygen is transferred from the lungs to the tissues and how carbon dioxide is transferred from the tissues to the lungs.
3. Explain how the respiratory center in the brain controls respiration.
4. Describe how oxygen and carbon dioxide are transported in the body.
5. Compare and contrast the various pulmonary volumes and capacities.

Cardiovascular System
1. Describe the events of the cardiac cycle.
2. Trace the cardiac conduction route.
3. Explain how changes in cardiac output and peripheral resistance can affect blood pressure.
4. Explain how Starling's Law, baroreceptors, chemoreceptors and hormones help regulate cardiac output and blood pressure.
5. Describe factors that affect fluid flow between the capillaries and the interstitial tissues.

Urinary System
1. Discuss the role of glomerular filtration in urine production.
2. Explain how hormones regulate urine volume and concentration.
3. Describe how the countercurrent mechanism allows urine concentration.
4. Compare the roles of the lungs and kidneys in maintaining acid-base balance.
5. Compare the mechanism of electrolyte balance.

Endocrine System
1. Describe the general function of hormones and explain how feedback mechanisms control their levels.
2. Compare the functions of the major pituitary hormones.
3. Discuss the funcitons of the hormones produced by the major perpherial endocrine glands.
4. Explain how spermatogenesis and oogenesis are regualted.
5. Describe the menstrual cycle, identifying the effects of the gonadotropic and ovarian hormones that regualte it.

Digestive System
1. Compare the functions of the exocrine and endocrine pancreas.
2. Explain how GI hormones regulate gastrointestinal, pancreatic and biliary functions.
3. Describe how carohydrates, proteins and lipids are broken down, absorbed and metabolized.
4. Describe the significance of ketone bodies in lipid metabolism.
5. Discuss the role of the liver in regulating blood glucose and muscle cell glycogen.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

1. Assessment of a student's ability to critically think through processes as they are presented. Students will be evaluated by their responses to specific questions which rely heavily on problem solving abilities and the use of case study pedagogical methods during lectures throughout the semester.

2. Student comprehension of course content will also be assessed by means of a number of quizzes and five regularly spaced exams throughout the semester. These exams will not focus on gross memorization but challenge the student's ability to effectively assimilate the course information and critically work through technical exam questions.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

Mastery of the course content of Organ Systems Physiology is fundamental to the training of all healthcare specialists and individuals interested in exploring careers in any field of the biological sciences. The view of the human body as a machine whose mechanisms of action can be explained by cause and effect relationships draws heavily on other disciplines (Anatomy, Biochemistry and Physics) which command the student to consider multiple approaches to a single topic. This expectation requires the student to analytically process information via the scientific method through both mechanistic and teleological approaches. The result will be a thorough understanding of why each organ functions the way it does and how it interacts with other organs in order to maintain homeostasis.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The course relates to the mission of the University by preparing students in Biomedical, Biology, Chemistry and Veterinery Science programs by providing quality instruction at the undergraduate level. BIOL 447 is an elective course in the Biomedical, Biology, Veterinary Sciences and Chemistry Programs for students interested in gaining admission to healthcare/veterinary related professional schools or PhD programs following graduation.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

The revised BIOL 447 will replace the existing BIOL 447 course.

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

This course does not duplicate nor overlap with any other existing courses offered at MSU.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Biol 447 is taken for program credit by studnets in the Department of Biology & Chemistry majoring in Biomedial Sciences, Biology & Chemistry. Students in the Veterinary Sciences Program can also potentially select this course as one of their Science Electives.

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

I am submitting this revision at the request of Dr. Charles Lydeard the Chair of the Department of Biology & Chemistry. I contacted Dr. Phil Prater (Veterinary Sciences) and Dr. Mark Blankenbueler (Chemistry) by phone and we discussed their students that may select this course as an upper-level BIOL elective in their respective programs and the impact of converting it from a 4 hour to a 3 hour elective.

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Dr. Darrin DeMoss, Ph.D., Professor of Biology. Specialty: Human/Animal Physiology

Dr. Michael Fultz, Ph.D., Professor of Biology. Specialty: Cell Biology

Dr. Kurt Gibbs, Ph.D., Professor of Biology. Specialty: Neurobiology

B. Identify external adjunct faculty, if appropriate.

NA

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

30-50 depending on interest among junior & senior Biomedical and Biology undergraduates and Biology graduate students.

B. Desired implementation date for the course.

Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

Lecture

D. Additional facilities and special equipment needs for this course, if any.

No additional facilities or equipment are needed

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ No

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

MOREHEAD STATE UNIVERSITY
COLLEGE OF SCIENCE
DEPARTMENT OF BIOLOGY AND CHEMISTRY

Organ Systems Physiology (BIOL 447)

Course Syllabus
Fall 2020

CATALOG DESCRIPTION: **BIOL 447. Organ Systems Physiology. (3-0-3). Fall.** Specific focus on three integrating themes: the interrelationships of human organ systems, homeostasis and the complementing relationship of structure and function. Homeostatic regulatory mechanisms between interactive organ systems will be continually emphasized, as well as how the body meets its changing demands during the onset of various pathological conditions.

COURSE ORGANIZATION: Section 001: Lectures TTH 12:00-1:50 in Lappin 213

PREREQUISITES: BIOL 245/245A and BIOL 301/CHEM 301

INSTRUCTOR:
Dr. Darrin DeMoss, Ph.D.
Office: 327H Lappin Hall
Office Phone: (606) 783-5388
d.demoss@moreheadstate.edu
Office hours: To be Announced / By Appointment

REQUIRED TEXT: Sherwood, L., *Human Physiology (From Cells to Systems, Ninth Edition).* Brooks/Cole, Cengage Learning; 2016.

ISBN # 978-1-285-86696-3

i>Clicker2: i>Clicker2 is a response system that will be used for the quizzing component of this course. Thus, you will need to purchase the device and register it immediately. To register your clicker go to www.iclicker.com/registration and complete the fields with your first name, last name, student ID, and remote ID. Your student ID starts with the letter m (Example m0443767) while the remote ID is the series of numbers and sometimes letters found on the bottom of the back of your i>clicker2 remote. It is your responsibility to remember to bring your clicker to class and to make sure that it is functioning.

COURSE PHILOSOPHY: Simply stated, physiology is the study of function. Function occurs at three levels: molecular, subcellular, and cellular. Events at these levels in turn determine the activities of tissues, organs, and systems. An understanding at each level is necessary to appreciate the overall function or dysfunction of an individual. The study of physiology can be divided into two general categories of information: processes and regulation. Or to put it another way, how does the body do what it does? And how

are these activities controlled to optimally benefit the individual? For example, how does the kidney produce urine? And, how is this process regulated so that the volume and salt content of that urine are matched to the salt and water intake of the individual and the loss of salt and water via other processes such as respiration and sweating?

The first portion of this textbook introduces the concept of homeostasis and the movement of water, electrolytes, and organic material across the cell membrane. Next the general physiology of excitable membranes is presented. Nerve conduction and synapses are presented along with discussions of skeletal and smooth muscle physiology. This section also introduces the two major regulatory systems of the body in chapters on chemical communication and the autonomic nervous system. These latter two chapters provide the background necessary to understand the regulation of the various organ systems. The next sections consider the physiology of the cardiovascular, respiratory, renal, and gastrointestinal systems. The understanding of the functions of these systems is necessary to appreciate a significant portion of endocrine control, which is left for the final section. Thus, this final section of the text also presents a significant amount of integrated physiology. This course will focus on the mechanisms of body function from cells to systems and is organized around the central theme of homeostasis (how the body meets changing demands while maintaining the internal constancy necessary for all cells and organs to function). The principles presented throughout the semester are the foundation of medicine, and the ability to work with them in countless clinical situations is essential to the practice of medicine. In order to help the student, ascertain that he or she is assimilating the material, exams will be given periodically throughout the semester. These exams will serve to identify important concepts and to illustrate depth of understanding required to utilize the principles and theories of human physiology.

Students will be expected to:

1. Use thinking, writing & math skills to evaluate, interpret, & solve physiological problems;

2. Use their understanding of chemical/molecular and cellular biology to evaluate how homeostasis maintains the internal environment within a specified range under normal conditions for any organ-system; and

3. Use their understanding of the physiology to interpret information associated with one organ-system and predict the impact on the homeostasis of other organ-systems in order to gain insight to the pathologic basis of disease.

BIOMEDICAL SCIENCES PROGRAM COMPETENCIES: Students graduating with the Bachelor of Science degree in Biomedical Sciences should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is both qualitative and quantitative.

2. A general competency in the physical sciences, including basic inorganic and organic chemistry, as well as introductory physics, mathematics and statistics.

3. An understanding of literacy of the disciplines of biology related to biomedicine, including cell biology, physiology, biochemistry, molecular biology, microbiology and genetics.

4. An understanding of the interdisciplinary nature of biomedical sciences and science in general.

5. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences, biological sciences and physical sciences to the human community.

BIOL 447 Organ System Physiology will address program competencies 3, 4 and 5.

BIOLOGICAL SCIENCES PROGRAM COMPETENCIES: Students graduating with the Bachelor of Science degree in Biology should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is both qualitative and quantitative.

2. An awareness of the basic concepts of the physical and biological sciences and how these concepts are applicable in the profession.

3. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences as well as the biological and physical sciences to the human community.

4. A basic understanding of literacy of all disciplines of biology, from molecular to cellular to organismal to populations levels that unite organismal, continuity, diversity and unity of life.

5. A general competency in basic inorganic and organic chemistry as well as in introductory physics, mathematics and statics.

BIOL 447 Organ System Physiology will address program competencies 2, 3 and 4.

"COMMUNITY ENGAGEMENT: A Light to and from the Mountains"
The Professional Education Unit at Morehead State University delivers rigorous, high quality programs that prepare professionals informed by the best national and international scholarship, research, literature, and experiences specific to Appalachia, thus preparing professionals to improve the schools, quality of life, and the communities in which they live and serve. This statement is not only the strategic mission for the College, but it also incorporates the conceptual framework that guides all our activities.

ATTENDANCE POLICY: There is a strong correlation between class attendance and success in Biology Courses; therefore, attendance to all lectures is critical and you are expected to attend. A student with a valid, documented university excuse (such as for illness/injury, military service, death in the family, or university-sponsored activity, etc…. as outlined in University Administrative Regulation 131.05 (UAR 131.05)) should **promptly notify Dr. DeMoss** in order to make up the material missed. Students are expected to prepare themselves for each lecture session by reading any related material prior to attending the lectures. Please do not be late because it puts you at a disadvantage and can easily disrupt the instructor and your peers. If your absence is an extended please contact **Mr. Max Ammons,** the Dean of Students, 109B Enrollment Services Center, (606) 783-2070 should be notified.

AMERICANS WITH DISABILITIES ACT (ADA): Students with disabilities are entitled to academic accommodations and services to support their access and safety. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact **Mrs. Evangeline Day**, Disability Services at (606) 783-5188, e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability for more information.

CAMPUS SAFETY STATEMENT: Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

ACADEMIC HONESTY: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

USE OF TECHNOLOGY: Students will be expected to use the internet, e-mail, word processing, and any other appropriate software needed to complete assignments.
ADD/DROP: The last date to register for a class is **Monday, August 26th** and the last date to drop this class with a grade of "**W"** is **Friday October 28th.**

EXAMINATIONS: A student with a valid excuse according to UAR 131.05 (verification required) for missing an exam should notify **Dr. DeMoss, beforehand if possible,** in order to schedule a make-up examination within one week following return to class. If your absence is going to be an extended one, it is recommended that the **Dean of Students, Mr. Max Ammons,** contacted. An exam missed without an acceptable excuse will be recorded as a **Zero**. All exams will be available for review for one week after the exam grades are returned. Students may review exams in **Dr. DeMoss's Office 327H Lappin Hall** or during the scheduled tutor session.

Program competencies 3, 4 and 5 will be addressed using exams periodically throughout the semester as the physiological content is covered.

QUIZZES: A number of quizzes worth varying point vales will be given and **cannot** be made up; they can however be taken in advance of your absence if your excuse for missing class is designated acceptable by the institution and more importantly, I have it prepared. If unable to take the quiz prior to missing the quiz a fair and equitable way to make-up the quiz will be agreed upon by the Dr. DeMoss and the student. Every quiz given will be counted until your total quiz score reaches a **maximum of 100 points**. Quizzes will be given at the start of class so being on time is critical. Quizzes will be either visual/matching or multiple choice or some combination thereof and they require the use of your i>clicker2.

Program competencies 3, 4 and 5 will be addressed using quizzes periodically throughout the semester as the physiological content is covered.

GRADING POLICY: Grades will be assigned on a % basis of 600 points.

Exam I	**100%pts**
Exam II	**100%pts**
Exam III	**100%pts**
Exam IV	**100%pts**
Exam V	**100%pts**
Quizzes	**100pts**
	600pts

GRADING SCALE:

A = 90-100%	**(537 - 600pts)**
B = 80-89%	**(477 - 536pts)**
C = 70-79%	**(417 - 476pts)**
D = 60-69%	**(357 - 416pts)**
E ≤ 59%	**(≤ 357pts)**

TUTOR SESSION: Their will be no regularly scheduled tutor session for Dr. DeMoss's BIOL 447, Organ Systems Physiology Course however if requested by the class a tutor session will be scheduled as we approach each exam. Additional tutoring may be received by making an appointment or through the Learning Lab in 208 Allie Young Hall (783-5200).

CLASSROOM BEHAVIOR:

Academic Dishonesty: Plagiarism or cheating in any form will not be tolerated and will be dealt with in accordance with the EAGLE: Student Handbook and the University Undergraduate Catalog. Academic dishonesty, as defined by the University, occurs when you do not do your own work, fail to give credit for the work of others, or use resources inappropriately.

Consistent Tardiness is not acceptable. You are expected to be in your seat and ready for class prior to 12:00 (Section 001) for every class session unless Lappin 213 is locked.

Cell Phones (including Blackberry's and iphones), Walkie Talkie's, PDA's, and Beepers must be shut off upon entering the classroom. **This means NO TEXTING!!!** MP3 Players, iPOD's or any other device requiring the use of headphones are not permitted during class. If I observe the use of any of these devices, I will collect the device and you can pick it up immediately following class, following your second offense you will be excused from class and you will have to schedule an appointment with me in order to return to class. The appearance of any of these devices during an exam will result in the collection of the device, failure of the exam and potentially the course following a meeting with the Dean of Students.

Laptops and Tape recorders are welcome but must be kept at your desk. It is a safety issue to have power cords running across the floor (It is your responsibility to have a fully charged battery). If I discover that you are doing anything other than course related material on your laptop during class, I will collect your computer and you can pick it up immediately following class, following your second offense you will lose your privilege to bring your laptop back to class.

Anyone caught with a cell phone out while reviewing an exam will have it confiscated immediately given a **ZERO** for the Exam and sent immediately to visit the Dean of Students.

Organ Systems Physiology
BIOL 447
Dr. DeMoss

Lecture Syllabus, Fall 2020

Class Meeting	
1	**Homeostasis**
2	**Basic Neural Physiology** Membrane Potential, Excitable Tissues,
3	**Basic Neural Physiology** Action Potentials, Synapses & Neural Integration
4	**Central Nervous System** Organization, Protection, Nourishment,
5	**Central Nervous System** Cerebellum, Brain Stem & Spinal Cord
6	**Peripheral Nervous System: Afferent Division** Receptor Physiology, Pain, Taste & Smell
7	**Exam I**
8	**Peripheral Nervous System: Afferent Division** Vision & Hearing
9	**Peripheral Nervous System: Afferent Division** Hearing & Equilibrium
10	**Peripheral Nervous System: Efferent Division** Autonomic / Somatic Nervous System & Neuromuscular Junction
11	**Muscle Physiology** Skeletal Muscle Contraction & Mechanics
12	**Muscle Physiology** Skeletal Muscle Metabolism, Fiber Types, Smooth & Cardiac Muscle
13	**Exam II**
14	**Cardiac Physiology** Anatomy & Electrical Activity

15	**Cardiac Physiology** Cardiac Cycle & Cardiac Output
16	**Cardiac Physiology** Atherosclerosis & Blood Flow
17	**Cardiac Physiology** Arteries, Arterioles, Capillaries & Veins Blood Pressure & Hypertension
18	**The Blood** Hemostasis
19	**Respiratory Physiology** Anatomy & The Respiratory Cycle
20	**Exam III**
21	**Respiratory Physiology** Alveolar Ventilation, Gas Exchange, Transport & Control of Respiration
22	**Renal Physiology** Anatomy**,** Glomerular Filtration
23	**Renal Physiology** Tubular Reabsorption, Urine Excretion & Plasma Clearance
24	**Fluid & Acid Base Balance**
25	**Gastrointestinal Physiology** Motility, Secretion, Digestion & Absorption
26	**Exam IV**
27	**Gastrointestinal Physiology** Enteric Plexus & Hormonal Regulation
	Endocrinology Principles & Theories
28	**Endocrinology** Hypothalamus **,** Pituitary & Thyroid
29	**Endocrinology** Adrenals, Pancreas & Calcium Metabolism
30	**Male Reproductive Physiology** Spermatogenesis
	Female Reproductive Physiology Oogenesis, Menstrual Cycle, Fertilization, Implantation & Parturition

31 **Exam V**

Final is Not Comprehensive

***** Any significant changes to the syllabus will be announced/discussed during scheduled class time. *****

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	BIOL 490 Biochemistry
Department: (as listed in current catalog)	Biology and Chemistry
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Amy S Moore (✓) Approved ( ) Disapproved 10/29/19

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

(✓) Approved ( ) Disapproved 10/31/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GROPE (✓) Approved ( ) Disapproved 2019 - Nov - 18

College Curriculum Committee (Sign and Print) Date

WAYNE MILLER (✓) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch 12/11/19

Dept (✓) Approved ( ) Disapproved 10/31/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	BIOL 490 Biochemistry
Department: (as listed in current catalog)	Biology and Chemistry
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	If an Information Technology signature is required, it has been obtained.	☐
☐	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☑	The course title, department, and college names correspond to the current catalog.	☐
☑	Course teaching workload, formula, and semesters taught are specified.	☐
☑	The course description EXACTLY matches the course description stated in the syllabus.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☑	Responses are complete and applicable for each question.	☐
☑	If the course requires the use of live animals, the IACUC form is attached.	☐
☑	The syllabus starts on a separate page.	☐
☑	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☐
☑	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☑	The syllabus contains the academic term with date.	☐
☑	The syllabus contains the instructor's name.	☐
☑	The syllabus contains the office location.	☐

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☐
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☐
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☐
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☐
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☐
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☐
☑	The syllabus contains a grading description and distribution (please be very specific).	☐
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☐
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☐
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☐
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☐
☑	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Approval Date: 10/29/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date: 10/31/19

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ New Course ☒ Revised Course

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)	BIOL	490	Biochemistry	4-0-4	4	
Proposed Course Name	BIOL	490	Advanced Biochemistry	3-0-3	3	Spring (or on demand)

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Area of Concentrations: Biomedical Sciences; Biology

This is a ☐ required course. This is an ☒ elective course.

Course Description

Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

BIOL 490 Advanced Biochemistry. (3-0-3) Prerequisites: C or better in BIOL 301 Fundamentals of Biochemistry or equivalent course. This course will acquaint the student with the major macromolecular constituents of the cell, the various chemical, biochemical, and molecular techniques that are used to isolate and study these macromolecules and the flow of information implicit in their sequence and structure, and the research analytical techniques exemplified in the primary scientific literature. There will be a further investigation of the biochemical, physiological, and systems level perspective of organismal function and pathology. Many of these investigations will further involve pharmacological agents and other remedies used in treatments of human diseases.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

This course has not been substantially revised for at least 30 years (with some modest modification of pre-requisites). Originally it had been offered as an alternative substitute for BIOL/CHEM 301 Fundamentals of Biochemistry, but with Program changes has been changed to an Advanced Elective. It has become an advanced course with a very high level of primary literature-based content and high levels of enrollment (above 50 for the last 2 Spring semester offerings). To give students more opportunities to gain knowledge in other upper elective fields of study, to help equalize other faculty participation in higher level electives and to match the credit-hour level of equivalent lecture without lab type courses in our program, this proposal mainly seeks to lower the number of credit hours from 4 to 3. Because it now requires BIOL/CHEM 301 Fundamentals of Biochemistry as a pre-requisite, (and experience has shown that those who do poorly in that course do MORE poorly in BIOL 490) a further prerequisite of a B or better in the pre-requisite BIOL/CHEM is justified and required.

B. Justify the proposed instructional level (100-600) or instructional level change.

Biochemistry has become an essential component of preparation for post-graduate professional training, especially in medical fields. The Medical College Admissions Test was revised in 2015 to strongly reinforce its emphasis on biochemical, physiological,

and systems level content and concurrently University of Kentucky Medical School has eliminated its standing Biochemistry course for medical students assuming that this training is part of the undergraduate curriculum (enunciated during the last two Biennial PreMedical Advisor Conferences 2017 and 2019) . A one-semester course in biochemical fundamentals may be adequate for an undergraduate degree, but it has become a shortcoming for those pursuing post-graduate training in health professional schools. The advanced understanding of complex biochemical pathways and molecular details of pathophysiological processes and dysregulated metabolic cycles requires intensive and comprehensive understanding of more than limited familiarity with the names of pathways and compounds. In addition, textbooks are often neither more nor less than a modelling of experimental outcomes that may be subject to varying interpretations of multiple technical experimental procedures. Consequently, an appreciation of what experimental techniques are used, the limitation of how controlled each is with respect to the area of study, and of the clinical signficance that is increasingly required by funding agencies in the interest of "translational science" (read medically or practically beneficial to society) science requires in depth study of the primary literature in such a course.

C. List the student learning outcomes for the <u>course</u>.

The proposed course will fulfill advanced elective credit for three undergraduate degree programs: Area of Concentration in Biomedical Sciences, Area of Concentration in Biology, and Area of Concentration in Biomedical Chemistry.

Students graduating with the Bachelor of Science degree in Biomedical Sciences should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is both qualitative and quantitative.
2. A general competency in the physical sciences, including basic inorganic and organic chemistry, as well as in introductory physics, mathematics and statistics.
3. An understanding of literacy of the disciplines of biology related to biomedicine, including cell biology, physiology, biochemistry, molecular biology microbiology and genetics.
4. An understanding of the interdisciplinary nature of biomedical sciences and science in general.
5. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences, biological sciences and physical sciences to the human community.

The course adopts the competencies 1., 3, 4, and 5 as the following student learning outcomes:

1. Demonstrate the ability to write, discuss, interpret and discuss qualitative and quantitate experimental results found in the primary literature.
3. Reading and explaining experimental techniques on which scientific theories and recommended medical regimens are prescribed.
4. Know the content of physiological and pathological states that emerge from an understanding of their biochemical mechanisms and causes.
5. Recognize the costs to society of unhealthy lifestyle choices and practices and what cultural practices or habits may be important issues to address in community health.

Students graduating with the Bachelor of Science degree in Biology should possess the following:

1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is contemporary in the biological sciences.
2. An awareness of the basic concepts of the physical and biological sciences and how these concepts are applicable in the profession.
3. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences as well as the biological and physical sciences to the human community.
4. A basic understanding of literacy of all disciplines of biology, from molecular to cellular to organismal to population levels that unite organismal, continuity, diversity and unity of life.
5. A general competency in basic inorganic and organic chemistry as well as in introductory physics, mathematics and statistics.

The course adopts the competencies 1., 2., 3., 4, and 5 as the following student learning outcomes:

1. Demonstrate the ability to write, discuss, interpret and discuss qualitative and quantitate experimental results found in the primary literature including understanding and explaining experimental techniques on which scientific theories depend for corroboration.
2. Extensive discussion of the molecular biology of biological and organic macromolecules and how their physical properties serve as their utility as substrates, products, enzymes, templates and cofactors in biochemical reactions.
3. Recognize the costs to society of unhealthy lifestyle choices and practices and what cultural practices or habits may be important issues to address in community health.
4. Extensive use of comparative protein sequence comparisons to elucidate through adaptive conservation of identified residues, enzymatic functions, or pathway networks their prominence in specific actions of enzymes in various biochemical pathways that critically illustrate how difference organisms cope with life’s demands.
4. Know the content of physiological and pathological states that emerge from an understanding of their biochemical causes.
5. The quantum level understanding of electrons as wave-forms that inhabit molecular bonding orbitals sometimes within conjugated bond systems is crucial to understanding the energetics of biochemical reactions and is stressed and discussed throughout this course.

The program competencies for a Bachelor's of Science in Chemistry are:

The student will:
1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e., be able to selfeducate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.
7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.
8. Be able to use the basic principles of chemistry as presented in the first-year class in a wide variety of contexts, especially the relationship of the microscopic physical model to bulk chemical behavior. Be able to relate scientific principles to observed behavior.

The course adopts the competencies 1., 3., 6, and 8. as the following student learning outcomes:

1., 3., 6. Demonstrate the ability to write, discuss, interpret and discuss qualitative and quantitate experimental results found in the primary literature. Reading and explaining experimental techniques on which scientific theories and recommended medical regimens are prescribed.

8. The quantum level understanding of electrons as wave-forms that inhabit molecular bonding orbitals sometimes within conjugated bond systems is crucial to understanding the energetics of biochemical reactions and is stressed and discussed throughout this course.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

ALL student learning outcomes will be assessed by:

1. Exam structured essays; scored by a rubric.
2. required student classroom participation and discussion, rewarded competitively by one point for each participation
3. objective tests of content and problem analysis using multiple choice, open answers
4. multiple choice daily "clicker" quizzes.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

Each student learning objective is based on the listed program competencies outlined above. The multiple types of assessment which include a daily clicker quiz and required student participation in question and answer discussions reinforces the practice of studying the primary literature, evaluating the experimental methods, analyzing the conclusions, and application to the target objectives. Ultimately each daily practice readies the student for four exams which requires that daily attention to the goals of the program and requires integration of information and reformulation and exhibition of that understanding through the use of structured essays.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

Morehead State University's Mission Statement
As a community of lifelong learners, we will:
Educate students for success in a global environment;
This course emphasizes and reinforces a comprehensive understanding of the biochemical , physiological and systems level nature of humans as biological organisms with a view to the health of the individual and of society, and how society contributes to each as a cultural environment.
Engage in scholarship;
The primary prereequisite for scholarship is understanding how it is done. This course exhaustively discusses experimental techniques and how the results of these experiments highlight some aspect of how organisms function.
Promote diversity of people and ideas;
Although many people have the misbegotten idea that scientist come up with facts, this course should make it clear that there are no real facts. Experimental facts depend critically on how experiments are done. Scientists compete for novelty and for being

first, and with respect to the cause and effect of biological and biochemical phenomena, there are often several competing ideas. This aspect of the scientific world is rarely appreciated when only the textbook versions of conclusions are presented as "facts" when in reality they are based on ideas that may be very strongly supported or weakly supported by a variety of experimental techniques or a single experiment. In addition, any view of the scientific literature reveals that science is done world-wide by people from varied backgrounds. Just reading the literature reveals how diverse the scientific world is and how science tends to transcend societal and cultural traditions.

Foster innovation, collaboration and creative thinking;

Innovative experimental techniques are constantly being introduced in the scientific literature. Knowing how these techniques work, their limitations, and what has been done to exponentially expand the scope and insight that can be gained about life processes and systems is a lesson in innovation. Viewing how many different disciplines intersect on a scientific problem emphasizes the collaborative approach.

Serve our communities to improve the quality of life.

Medical research is at the forefront of improving the quality of life in the world, society and the community. Most of those studying in this course have that as their life goal, and for those who further themselves to do so, have given ample and frequent credit to the program and such courses for how well they have been prepared to do well and competitively in the professional schools that allow them to improve our world.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

BIOL 490 Biochemistry (4-0-4)

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

none

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

none applies outside of the Department of Biology and Chemistry

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Dr. Craig Tuerk; biochemist and molecular biologist; Ph.D Cellular, Molecular and Developmental Biology, University of Colorado, Boulder (1990); Professor

B. Identify external adjunct faculty, if appropriate.

none

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

48

B. Desired implementation date for the course.

Spring 2021

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

lecture, discussion, student presentation

D. Additional facilities and special equipment needs for this course, if any.

none

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and

services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**

- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Course Syllabus:
MOREHEAD STATE UNIVERSITY College of Science Department of Biology and Chemistry

Course: BIOL 490/690 Advanced Biochemistry. (3-0-3)

Spring 2020

Instructor: Craig Tuerk Office: 301D Lappin, 3-2958, c.tuerk@moreheadstate.edu

Office hours by appointment: 9am to 1pm Thursdays

Text: Biochemistry: A Short Course. Tymoczko, Berg, and Stryer. (2015). ISBN-13: 978-1-4641-2613-0

BIOL 490 Advanced Biochemistry. (3-0-3) Prerequisites: C or better in BIOL 301 Fundamentals of Biochemistry or equivalent course. This course will acquaint the student with the major macromolecular constituents of the cell, the various chemical, biochemical, and molecular techniques that are used to isolate and study these macromolecules and the flow of information implicit in their sequence and structure, and the research analytical techniques exemplified in the primary scientific literature. There will be a further investigation of the biochemical, physiological, and systems level perspective of organismal function and pathology. Many of these investigations will further involve pharmacological agents and other remedies used in treatments of human diseases.

STUDENT LEARNING OUTCOMES: The proposed course will fulfill advanced elective credit for three undergraduate degree programs: Area of Concentration in Biomedical Sciences, Area of Concentration in Biology, and Area of Concentration in Biomedical Chemistry.

Students graduating with the **Bachelor of Science degree in Biomedical Sciences** should possess the following:
1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is both qualitative and quantitative.
2. A general competency in the physical sciences, including basic inorganic and organic chemistry, as well as in introductory physics, mathematics and statistics.
3. An understanding of literacy of the disciplines of biology related to biomedicine, including cell biology, physiology, biochemistry, molecular biology microbiology and genetics.
4. An understanding of the interdisciplinary mature of biomedical sciences and science in general.
5. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences, biological sciences and physical sciences to the human community.

The course adopts the competencies 1., 3, 4, and 5 as the following student learning outcomes:

1. Demonstrate the ability to write, discuss, interpret and discuss qualitative and quantitate experimental results found in the primary literature.
3. Reading and explaining experimental techniques on which scientific theories and recommended medical regimens are prescribed.
4. Know the content of physiological and pathological states that emerge from an understanding of their biochemical mechanisms and causes.
5. Recognize the costs to society of unhealthy lifestyle choices and practices and what cultural practices or habits may be important issues to address in community health.

Students graduating with the **Bachelor of Science degree in Biology** should possess the following:
1. Written, oral and interpersonal communication skills in the sciences that will allow the graduate to collect, analyze, interpret, utilize and present information that is contemporary in the biological sciences.
2. An awareness of the basic concepts of the physical and biological sciences and how these concepts are applicable in the profession.
3. An awareness of the importance of the arts, humanities, social and behavioral sciences, health sciences as well as the biological and physical sciences to the human community.

4. A basic understanding of literacy of all disciplines of biology, from molecular to cellular to organismal to population levels that unite organismal, continuity, diversity and unity of life.
5. A general competency in basic inorganic and organic chemistry as well as in introductory physics, mathematics and statistics.

The course adopts the competencies 1., 2., 3., 4, and 5 as the following student learning outcomes:

1. Demonstrate the ability to write, discuss, interpret and discuss qualitative and quantitate experimental results found in the primary literature including understanding and explaining experimental techniques on which scientific theories depend for corroboration.
2. Extensive discussion of the molecular biology of biological and organic macromolecules and how their physical properties serve as their utility as substrates, products, enzymes, templates and cofactors in biochemical reactions.
3. Recognize the costs to society of unhealthy lifestyle choices and practices and what cultural practices or habits may be important issues to address in community health.
4. Extensive use of comparative protein sequence comparisons to elucidate through adaptive conservation of identified residues, enzymatic functions, or pathway networks their prominence in specific actions of enzymes in various biochemical pathways that critically illustrate how difference organisms cope with life's demands.
4. Know the content of physiological and pathological states that emerge from an understanding of their biochemical causes.
5. The quantum level understanding of electrons as wave-forms that inhabit molecular bonding orbitals sometimes within conjugated bond systems is crucial to understanding the energetics of biochemical reactions and is stressed and discussed throughout this course.

The program competencies for a **Bachelor's of Science in Chemistry** are:

The student will:
1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e., be able to selfeducate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.
7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.
8. Be able to use the basic principles of chemistry as presented in the first-year class in a wide variety of contexts, especially the relationship of the microscopic physical model to bulk chemical behavior. Be able to relate scientific principles to observed behavior.

The course adopts the competencies 1., 3., 6, and 8. as the following student learning outcomes:

1., 3., 6. Demonstrate the ability to write, discuss, interpret and discuss qualitative and quantitate experimental results found in the primary literature. Reading and explaining experimental techniques on which scientific theories and recommended medical regimens are prescribed.

8. The quantum level understanding of electrons as wave-forms that inhabit molecular bonding orbitals sometimes within conjugated bond systems is crucial to understanding the energetics of biochemical reactions and is stressed and discussed throughout this course.

ALL student learning outcomes will be assessed by:
1. Exam structured essays; scored by a rubric.
2. required student classroom participation and discussion, rewarded competitively by point for each participation
3. objective tests of content and problem analysis using multiple choice, open answers
4. multiple choice daily "clicker" quizzes.

Each student learning objective is based on the listed program competencies outlined above. The multiple types of assessment which include a daily clicker quiz and required student participation in question and answer discussions reinforces the practice of studying the primary literature, evaluating the experimental methods, analyzing the conclusions, and application to the target objectives. Ultimately, each daily practice readies the student for four exams which requires daily attention to the goals of the program and requires integration of information and reformulation and exhibition of that understanding through the use of structured essays.

COURSE POINT DISTRIBUTION:
DAILY PARTICIPATION SESSIONS: During each class session there will be frequent clicker quiz sessions. Six points can be earned during each lecture for all the questions combined. Those points can also be earned by answering instructor-posed questions correctly in class OR BY ASKING PERTINENT CONTENT-RELATED QUESTIONS ASSOCIATED WITH THE CURRENT LECTURE MATERIAL. Once the required 175 points are achieved, then no more credit can be earned in this category. Note that the 26 scheduled lectures' quizzes are worth a total of 156 points requiring some participation to gain 100% of those points needed. Quizzes alone can be made up for university-approved excuses during my office hours by appointment. Participation can be made up during presence during other lectures.

EXAMS: There will be four **exams** (one given during finals week) given during the semester each worth 175 pts. The exam dates will be: **2/10; 3/09; 4/13; 5/06**

Daily participation 175 pts.; Exams 700 pts
The final grade will be computed as a percentage of points accumulated.
100-90=A; 80-89=B; 70-79=C; 60-69=D; <60=E (No negotiations concerning the correlation between points and grades. For example, rounding to the second decimal point, 89.49 is a B and 89.50 is an A However if a mistake is made in assigning correct versus incorrect answers, I'll be happy to correct that).

ATTENDANCE POLICY: Attendance is monitored by performance in daily lecture quiz and participation points. Lecture quizzes can be made up for absences that have university-approved excuses (see UAR 131.04,). The most efficient way to prepare for these quizzes is to have come to the previous lecture, reviewed the assigned quiz and reading material and to show up for class on time. A student with a valid excuse (verification required) for missing an exam should notify the instructor **beforehand** in order to schedule a make-up of the exam. If for unforeseen circumstances, an exam is missed, then get in touch with me ASAP to arrange a makeup.

CHEATING POLICY: In addition to the student handbook "Academic honesty" policy listed below, I define cheating as: the presence of anything on the table but the exam papers and the student's pencil during tests or quizzes or clicker pads; student's eyes looking at another student's exam, scantron or clicker; secretive sources of information that I may observe being used during exams and quizzes; **ANY DISCUSSION OR COMMUNICATION BETWEEN STUDENTS** during quizzes and exams. In the cases of all forms of cheating I will give a zero for that exercise. (THERE ARE NO RESTROOM BREAKS DURING EXAMS; GO BEFORE YOU COME TO CLASS; ALL NOTES, BOOKS, BACKPACKS, BAGS, AND ELECTRONIC DEVICES ARE TO BE STOWED OUT OF YOUR SIGHT DURING EXAMS!)

In the following table of the Tentative Lecture Schedule (next page), theText Chapter readings are reference readings from the textbook (see above) and the numbers in the Ref. column are the numbered reference articles associated with each Lecture which contains assigned content for which you are responsible. There will also be subsidiary research articles that we will deal with during the semester that contains technical content and theoretical content for which you will be responsible as assigned.

Tentative Lecture schedule

Date	Topics	Text Chapters	Ref.
1/13	review and overview of biochemical pathways	Ch. 16-20; 24-28	
1/15	review and overview of Central Dogma processes	Ch. 33,34; 36-40	
1/22	review and overview of cell structure and function	Ch. 1	
1/27	mechanisms of terminal processes in apoptosis	Lecture notes	1, 2
1/29	DNA polymerase structure and function	Lecture notes	3
2/03	routes and mechanisms of DNA damage and repair	Ch. 35	
2/05	apoptotic consequences of DNA damage	Lecture notes	4
2/10	Exam1		
2/12	folate metabolism and cancer treatment	Ch. 32	
2/17	beta cell structure and function	Ch. 13	
2/19	molecular mechanisms of insulin secretion	Ch. 16	
2/24	incretin responses, agents and mechanisms	Lecture notes	5
2/26	insulin signalling mechanisms	Ch. 13	
3/02	insulin-dependent glucose uptake	Lecture notes	6
3/04	insulin resistance-biochemical mechanisms	Lecture notes	7
3/09	Exam2		
3/11	contraction-stimulated muscle glucose uptake	Lecture notes	8
3/23	diabetes mellitus treatments and efficacy	Lecture notes	9
3/25	hyperglycemic damage to endothelial cells	Lecture notes	10, 11
3/30	enzymology of the clotting cascade	Lecture notes	12
4/01	signalling mechanisms of endothelial inflammation	Lecture notes	13
4/06	prostaglandins synthesis and effects	Ch. 28	14, 15
4/08	NSAIDs-mechanism, action and outcomes	pp. 210,211	15
4/13	Exam3		
4/15	autonomic control of blood flow	Lecture notes	16, 17
5/20	renin-angiotensin axis of blood pressure control	Lecture notes	18
4/22	anti-hypertensive medications and mechansims	Lecture notes	18, 19
4/27	eIF2-dependent regulation; unfolded protein response	Lecture notes	20, 21
4/29	mTORC1 regulation of protein synthesis;	Lecture notes	22, 23
5/06	Final Exam Time: TBD		

Literature References:

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The Rab GTPase-Activating Protein AS160 Integrates Akt, Protein Kinase C, and AMP-Activated Protein Kinase Signals Regulating GLUT4 Traffic. Diabetes Feb 2007, 56 (2) 414-423; DOI: 10.2337/db06-0900
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Campus Safety Statement
Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

Academic honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA)
Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

MOREHEAD STATE UNIVERSITY

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October 31, 2019

To Whom it May Concern:

In order to improve the quality of our departmental undergraduate courses and programs a task force was formed in the department. The attached two curriculum and four course proposals are a product of that endeavor.

Biology Curriculum – In order to improve the curriculum for students and provide a greater amount of flexibility for choosing where to focus study within the area of biology. The proposed changes include (1) allowing students to choose between BIOL 317/317L Microbiology and BIOL 380/380L Cell Biology, as opposed to having both as required courses; (2) currently, biology students must choose to take BIOL 425/425L Animal Physiology or BIOL 426/426L Plant Physiology. We will keep these courses active but move them to the elective category. Other changes are designed to remedy problems experienced by our double majors (ex. Biology & Physics dual major) who have been required to take redundant courses in the past to satisfy both majors' requirements and at the same time, offer additional flexibility to Biology majors. Therefore, (3) we propose to add as an either/or option Physics 231 & 232 (calculus based physics) to the existing Physics 201 & 202 (algebra based physics) requirement, and MATH 353 as an either/or with MATH 365 to remedy this problem. Finally, (4) we propose changing the requirement from taking PHYS 202/202A to taking one course from the following: CHEM 327 w/ lab, ESS 109 w/ lab, PHYS 202/202A or PHYS 232 w/ lab. Students interested in cellular/molecular biology would likely take CHEM 327 or PHYS 202/232, while ecology/evolutionary biology-oriented students likely would take ESS 108 or PHYS 202/232.

Biomedical Sciences Curriculum

The proposed changes are to remedy problems experience by our double majors (ex. Biology & Physics dual major) who have been required to take redundant courses in the past to satisfy both majors' requirements and at the same time, offer additional flexibility to Biomedical Science majors. Therefore, we propose to add as an either/or option Physics 231 & 232 (calculus-based physics) to the existinng Physics 201 & 202 (algebra-based physics) requirement, and MATH 353 as an either/or with MATH 365 to remedy this problem.

Alteration of all 4-credit lecture only course offerings 3-credits (BIOL 336, BIOL 384, BIOL 447, BIOL 490).

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form

Revised January 2019

Program: (as listed in current catalog)	Biological Sciences Area Bachelor of Science
Department: (as listed in current catalog)	Biology and Chemistry
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Charles Lydeard (✓) Approved ( ) Disapproved 10/31/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GROPE (✓) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) — Date

Wayne Miller (✓) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) — Date

Chris Miller ( ) Approved ( ) Disapproved 12/6/19

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Dept: Kurt M. Fiala Kurt Fiala (✓) Approved ( ) Disapproved 10/31/19

Undergraduate Curriculum Committee (Sign and Print) Laurie Conover Laurie Conover 12/16/19 — Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Biological Sciences Area Bachelor of Science
Department: (as listed in current catalog)	Biology and Chemistry
College: (as listed in current catalog)	Science

Helpful Information:

1. Important Definitions Used in the Curriculum Process
   - Area = a program of study comprised of at least 48 hours
   - Major = a program of study comprised of at least 30 hours, accompanied by a minor
   - Minor = a set of discipline-specific courses of at least 21 hours
   - Certificate = a series of courses related to a specific topic or skill with a prescribed number of hours. For additional information contact the Office of Academic Programs at 783-2003 or email undergraduate@moreheadstate.edu.
   - Core = a set of required courses taken by all students in a specific Area or Major
   - Track = a subset of courses within an area or major designed to develop expertise in a particular topic at the undergraduate level
   - Equated courses vs. cross-listed courses = equated courses are courses of identical content that have different prefixes (and are approved through the undergraduate curriculum process), whereas cross-listed courses have the same instructor and are offered at the same time/location.
   - Pre-requisite = course(s) that a student must successfully complete prior to registering for a more advanced course.
   - Co-requisite = course(s) that a student must take concurrently with another course.
2. An Associate's Degree normally requires at least 60 semester hours including 15 hours of prescribed general education credit.
3. A baccalaureate degree program at the undergraduate level is either an Area or a Major.
4. A program's total credit hours include program core (i.e., courses taken by all students in the program), program supplemental courses (other required hours), and program specific electives. No general education courses or free elective courses count toward total program hours.
5. Curriculum should be designed so that the program's total credit hours plus general education hours and free electives add up to 120 total hours, with 42 of the hours in upper division (i.e., 300- to 400-level) courses.
6. To ensure that students enrolled in a program have common experiences fifty percent (50%) of a program's total credit hours must be made up of core courses.
   Examples:
   a. If an Area is designed with 48 hours, then 24 or more of those hours must be in core courses. The rest of the program hours can be other program requirements that vary from student to student.
   b. If a Major is designed with 30 hours, then 15 or more of those hours must be in core courses. The remainder of the major hours can be other program supplemental courses and program specific electives that vary from student to student. The minor is not considered in calculations for this 50% rule.
   c. If a Major has 30 hours and includes tracks, the core must contain at least the same number (or

higher) of hours as the track. For example, a Major could have 15 hours in core, 9 hours in the track, and 6 hours as program electives.

7. Any proposal with a secondary education component must be routed through the Teacher Education Council.

8. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

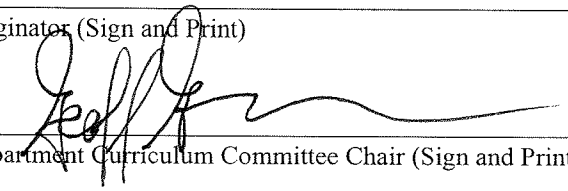
The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☐	If an Information Technology signature is required, it has been obtained.	☐ n.a.
☐	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☐	The title, department, and college names correspond to the current catalog.	☑
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☐	Responses are complete and applicable for each question.	☑
☐	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☐	Each course has been reviewed for pre-requisites, co-requisites or testing requirements. There are no hidden pre-requisites, co-requisites, or testing requirements.	☑
☐	The program core contains at least 50% of the total program hours (not including general education and free elective hours)	☑
☐	The program core does not contain courses that should be listed in other sections of the proposal (i.e. Other Program Required Hours, Program Electives, etc.).	☑
☐	The program has an adequate number of area/major hours (minimum of 48 for area and minimum 30 for major).	☑
☐	The program has at least 42 upper division hours.	☑
☐	If the program is a major, hours are designated for an accompanying minor.	☐ n.a.
	If the program has tracks, the total track hours do not exceed the total core hours.	
☐	The program has a maximum of 120 hours. If not, sufficient rationale is included in the proposal.	☑
☐	The curriculum maps each start on a separate page.	☑
☐	The curriculum map contains the official name of the program and track (if applicable).	☑
☐	The curriculum map contains accurate course prefix, number, and name for each course.	☑
☐	The curriculum map lists General Education courses in the first two years.	☑

☐	If the program has tracks, a separate curriculum map is included for each track.	☑
☐	The curriculum map contains EXACTLY the same courses and the same number of credit-hours as the proposal.	☑
☐	The curriculum map does not contain hidden pre-requisites or co-requisites.	☑
☐	The curriculum map codes are accurate.	☑
☐	If the program has tracks, a separate curriculum map is included for each track.	☑
☐	The total credit hours for each semester are acceptable (full-time, not overload, etc.).	☑
☐	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Approval Date



Department Curriculum Committee Chair (Sign and Print) — Approval Date

10-28-19

PROGRAM
Major Revision of Existing Program

The outline below is to be used for program revisions. Each revised or new course included in this program requires a separate "New Course or Major Revision to Existing Course" proposal. *Note: an amended curriculum map must be attached to each "Major Revision of Existing Program" proposal.*

I. EXISTING PROGRAM REVISION

State the current title of the Program (as listed in the current catalog)

Biological Sciences Area

List the degree (e.g. Bachelor of Science) and major or area (e.g. Math Major, Biology Area); as listed in the current catalog. Include tracks if applicable (e.g. Bachelor of Arts, Philosophy Major, Religious Studies Track).

Biological Sciences Area Bachelor of Science, Biology Track; Biological Sciences Area Bachelor of Science, MSUTeach Track; Biological Sciences Area Bachelor of Science, 4+1 Track.

State the proposed revised title of the Program (if applicable)

N/A

If the degree (e.g. Bachelor of Science) and/or major or area (e.g. Math Major, Biology Area) names are changing, please list them below. Include tracks if applicable.

N/A

CIP Code - ***Contact your department chair to verify the correct CIP Code information.***

26.0101 Biology/Biological Sciences, General

II. NEED AND JUSTIFICATON

A. Describe the changes and justify what this proposal is requesting; what are you doing and why are you doing it?

Although the basic undergraduate biology curriculum at most universities has remained uniform for decades, there has been a trend to create additional flexibility within the curriculum to facilitate the diverse needs of our student population. The expanding technological needs of a science-based society relies on diverse and incresingly specialized skills. Graduate programs have transitioned from a common core of required courses for all students to tracks of undergraduate courses specific to areas of intended study. Accordingly, an undergraduate biology curriculum task force has evaluated the biology curriculum, which had not been revised in many years and determined the following changes should be made to improve the curriculum for students and provide a possibly more flexible program for choosing where to focus study within the area of biology. The proposed changes include (1) allowing students to choose between BIOL 317/317L Microbiology and BIOL 380/380L Cell Biology, as opposed to having both as required courses; (2) currently, biology students must choose to take BIOL 425/425L Animal Physiology or BIOL 426/426L Plant Physiology. We will keep these courses active but move them to the elective category. Other changes are designed to remedy problems experienced by our double majors (ex. Biology & Physics dual major) who have been required to take redundant courses in the past to satisfy both majors' requirements and at the same time, offer additional flexibility to Biology majors. Therefore, (3) we propose to add as an either/or option Physics 231 & 232 (calculus based physics) to the existing Physics 201 & 202 (algebra based physics) requirement, and MATH 353 as an either/or with MATH 365 to remedy this problem. Finally, (4) we propose changing the requirement from taking PHYS 202 w/lab to taking one course from the following: CHEM 327 w/ lab, ESS 108 w/ lab, PHYS 202 w/lab or PHYS 232 w/ lab. Students interested in cellular/molecular biology would likely take CHEM 327 or PHYS 202/232, while ecology/evolutionary biology-oriented students likely would take ESS 108 or PHYS 202/232.

B. Program *coherence* refers to 1) appropriate sequencing of courses, not a mere bundling of credits, so that 2) student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Describe any impacts to coherence that the proposed revision to the program may have.

There will be no impacts to coherence of program.

C. Have the admission requirements changed? If so, how?

No.

D. If a similar program at MSU or in Kentucky exists, provide justification for the duplication.

This is not a new program, but will make our program more competitive with other programs in the state focusing on biology.

III. PURPOSE, GOALS, AND OBJECTIVES

A. What are the goals and objectives of this proposal? How do the proposed changes impact the program's alignment with the program's mission and goals, and/or the University's mission and goals?

Better prepare students for entry into science professional schools (e.g., medical school, pharmacy school, graduate school) or for employment in a science-related field.

B. State the revised program outcomes or competencies to be achieved by students.

There is no revision to the program outcomes or competencies to be achieved by students.

C. How do the specific goals and objectives relate to the mission statement of the University?

The Biological Sciences program is designed to provide a strong foundation for students interested in pursuing a career in the many branches of biology. As a community of learners committed to individual achievement, our mission is to educate students for success in a global evironment. The Biological Sciences program supports this success by establishing and maintaining high standards for all students enrolled in the program. Specifically, students will (1) develop a fundamental knowledge base in the diverse disciplines of biology (Biological Knowledge); and (2) develop skills in laboratory settings in the appropriate application of the Scientific Method. Biological Knowledge – a comprehensive exam is administered to students during the capstone course to assess student knowledge in the following subject areas: Genetics, Microbiology, Biochemistry, Ecology, and Evolution. Scientific Method – the following course-embedded assessment activities are utilized to assess student understanding of the scientific method and performance of laboratory skills: Micropipetting, Graphing, Gram staining and Microscopy, and DNA Sequence Analysis.

D. List the methods of program assessment to be used other than course grades to ensure that the desired outcomes or competencies are attained by students. Indicate the frequency of assessment and how results will be made available to program faculty.

For Biological Sciences, the following will be used to evaluate competency:
1. Departmental Exit Examination scores. This is a multiple choice exam offered once during the capstone course.
2. Laboratory skills performance assessments administered in selected Program core biology courses. These assessments occur twice in BIOL 317, and once each in BIOL 301 and BIOL 304. All performance assessments are scored against developed rubrics.
For 1 and 2, results are compiled into an annual WEAVE report.
3. Performance of graduates on entrance examinations to post-baccalaureate programs (GRE, MCAT, PCAT, DAT).
4. Employer feedback.
5. Graduate feedback.

E. List discipline-specific standards for accreditation in addition to Southern Association of Colleges and Schools (SACS) accreditation standards. If applicable, attach current statement of requirements.

N/A

IV. IMPACT

A. How will the program changes affect transfer students?

Transfer students will not be affected by the proposed changes, as no additioanl requirements to the existing program are being proposed. Additionallly, most community colleges and universities offer programs of study in biology whose major courses and electives transfer into MSU. On a positive note, it is possible more flexible curriculum will attract more transfer students to program.

B. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. offers required courses for this program**
- **b. offers elective courses for this program**
- **c. offers similar courses in their program**
- **d. has an equated course**
- **e. has courses in this proposal listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources.**

The Department of Mathematics, Physics, Earth Science, and Space Systems Engineering, and MSUTeach are the only departments affected by the proposed changes.

C. Explain the potential impact on the other departments and programs.

The proposed changes will not affect the overall number students taking math and physics courses, but may cause a small increase in students enrolled in the ESS 108. After conferring with colleagues, we agree that these shifts will be insignificant and not cause problems for either department. It may also attract more students to MSUTeach.

D. List the individuals in the other departments and programs notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Eric Jerde - Chair PESSE; Dr. Chris Schroeder - Chair of Math; Dr. Edna Schack - Dir. MSUTeach

E. Does this program revision require new technology? Please note that Information Technology (GH 110) should be notified when the program proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** ☒ **No** **(If yes, a representative from Information Technology must sign the signature sheet.)**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server based license for the software. (IT does not install individual packages in labs, only server based versions).**

2. **the type of hardware to be utilized.**

V. PERSONNEL

A. List name(s), qualifications including highest earned degree, and academic rank(s) of departmental faculty who will teach courses in this program.

Dr. Darrin DeMoss, Ph.D., Professor
Dr. David Eisenhour, Ph.D., Professor
Dr. Mike Fultz, Ph.D., Professor
Dr. Geoff Gearner, Ph.D., Professor
Dr. Kurt Gibbs, Ph.D., Associate Professor
Dr. Janelle Hare, Ph.D., Professor
Dr. Charles Lydeard, Ph.D., Professor
Ms. Malinda McMurry, M.S., Instructor
Dr. Melissa Mefford, Ph.D., Assistant Professor
Dr. Sean O'Keefe, Ph.D., Associate Professor
Dr. David Peyton, Ph.D., Professor
Dr. Brian Reeder, Ph.D., Professor
Dr. Allen Risk, Ph.D., Professor
Dr. David Smith, Ph.D., Associate Professor
Dr. Craig Tuerk, Ph.D., Professor
Dr. Sarah Umphress, Ph.D., Instructor

B. Identify external or adjunct faculty, if appropriate.

N/A

C. List any additional support personnel (clerical, laboratory assistants, and technicians) needed for implementation.

N/A

D. List additional faculty including academic rank and qualifications, who must be employed during the next four years if this is implemented.

N/A

VI. ADDITIONAL INFORMATION

A. Identify the enrollment and number of graduates from this program for the past four years

Previous Four Years	Enrollment	Graduation
2018-2019	126	10
2017-2018	134	11
2016-2017	164	10
2015-2016	157	17

B. List anticipated enrollment and number of graduates from this program for the next four years.

Next four years	Enrollment	Graduation
2019-2020	125	10
2020-2021	125	10
2021-2022	125	10
2022-2023	125	10

C. Explain any additional or remodeled facilities that will be required.

N/A

D. List any additional equipment required.

N/A

E. Provide the estimated additional cost required to support this program for the next four years. Identify source of new funds (special legislative request, system reallocation, etc.).

N/A

VII. PROPOSED PROGRAM REQUIREMENTS

Please use the following template to list all Program courses. To create additional lines, tab while cursor is in the last "Course Hours" field.

Example of different types of entries. Not all programs, minors or certificates will have each type of entry.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MSU	300	Name of course	3
MSU	400	Name of variable hour course	1-3
Variable		Free Electives	9

General Education

If the Program requires specific general education courses list them here. These courses should NOT have hours listed again in the Program requirements. (e.g. exchange courses, capstone, etc.) Remaining hours should be listed with "variable" as course prefix and "General Education" as course name with the total remaining general education hours in course hours.

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
MATH	152	College Algebra (students who choose this option must also complete MATH 141) OR	3
MATH	174	Pre-Calculus OR	3

MATH	175	Calculus	4
BIOL	171	Principles of Biology I w/lab (NSC I Exchange)	4
CHEM	111	Principles of Chemistry I w/lab (NSC II Exchange)	4
BIOL	499D	Principles of Evolution	3
Variable		General Education	24

Total General Education Hours	38-39

Program Core Hours

Program Core courses must be taken by all students in the program. This section cannot contain options such as "MSU 111 or MSU 112" or "choose 3 hours from the following list". Any core Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
BIOL	210	General Zoology w/ Lab	4
BIOL	215	General Botany w/ Lab	4
BIOL	301	Biochemistry w/Lab	4
BIOL	304	Genetics w/Lab	3
BIOL	461	Ecology w/ Lab	3
CHEM	112	Principles of Chemistry II w/ Lab	4
CHEM	326	Organic Chemistry I w/ Lab	4

Total Program Core Hours (This total should be at least 50% or more of the Total Program Hours; not including general education hours and free elective hours).	26

Other Program Required Hours

Other Program Required Hours are required program courses with the option of choosing between two specific courses (i.e. "MSU 111 or MSU 112"). Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
		All students – choose ONE from the following	
BIOL	317	Principles of Microbiology w/ Lab	4
BIOL	380	Cell Biology w/ Lab	3
		All students – choose ONE from the following	
PHYS	201	Physics I w/ Lab	4
PHYS	231	Engineering Physics I w/ Lab	5

		All students – choose ONE from the following	
PHYS	202	Physics II w/ Lab	4
PHYS	232	Engineering Physics II w/ Lab	5
CHEM	327	Organic Chemistry II w/ Lab	4
ESS	108	Physical Geology w/ Lab	4
		Students who elect to take MATH 152 as the general education MATH must also take MATH 141 – not required for students who take MATH 174 or MATH 175 as the general education course.	
MATH	141	Trigonometry	0-3
		All students – choose ONE from the following	
MATH	353	Statistics	3
MATH	365	Intro to Mathematical Statistics	3

Total Other Program Required Hours	14-20

Program Electives

Program Electives are a list of required program-related courses from which a student chooses a specific number of hours. (e.g. "choose 3 hours from the following list"). Track electives should be listed in the Track section.

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**

Total Program Elective Hours	

IF YOUR PROGRAM DOES NOT HAVE TRACKS, PLEASE PROCEED TO THE FREE ELECTIVE SECTION BELOW.

***Please note: If you need more than two tracks, please contact *undergraduate@moreheadstate.edu* so that the forms can be revised to fit your needs.**

Program Track Name: Biology Track

Please list all Track Requirements

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
		Choose five Advanced Biological Sciences Program Electives from the following	
BIOL	317	Principles of Microbiology w/ Lab*	4
BIOL	318	Local Flora w/ Lab	3

BIOL	334	Entomology w/ Lab	3
BIOL	337	Comparative Anatomy w/ Lab	3
BIOL	338	Developmental Biology w/ Lab	4
BIOL	356	Conservation Biology	3
BIOL	357	Environmental Testing Methods w/ Lab	3
BIOL	380	Cell Biology w/ Lab*	3
BIOL	384	Pathologic Basis of Disease	3
BIOL	385	Neurobiology	3
BIOL	407	Invertebrate Zoology w/ Lab	3
BIOL	409	Limnology w/ Lab	3
BIOL	421	Biology of Ferns w/ Lab	3
BIOL	424	Immunology w/ Lab	3
BIOL	425	Animal Physiology w/ Lab	3
BIOL	426	Plant Physiology w/ Lab	3
BIOL	427	Pathogenic Microbiology w/ Lab	3
BIOL	428	Virology	3
BIOL	429	Histology w/ Lab	3
BIOL	431	Herpetology w/ Lab	3
BIOL	433	Ichthyology w/ Lab	4
BIOL	437	Ornithology w/ Lab	3
BIOL	438	Mammalogy w/ Lab	3
BIOL	443	General Parasitology w/ Lab	3
BIOL	446	Biotechnology w/ Lab	3
BIOL	447	Organ Systems Physiology	3
BIOL	449	Plant Anatomy w/ Lab	3
BIOL	451	Advanced Cell Biology	3
BIOL	452	Aquatic Entomology w/ Lab	3
BIOL	456	Plant Morphology w/ Lab	3
BIOL	473	Medical-Veterinary Entomology w/ Lab	4
BIOL	478	Animal Behavior	3
BIOL	480	History of Science	3
BIOL	490	Advanced Biochemistry	3
		*These courses cannot count as both Biology track electives and other required program hours.	

Total Track Hours	15-20

Program Track Name: MSUTeach			
Please list all Track Requirements			
Course Prefix (Example:	**Number (Example: 100)**	**Course Name**	**Course Hours**

ENG)			
BIOL	155	Environmental Biology	3
UTCH	100	MSUTeach 100: STEP 1 – Inquiry Approaches to Teaching	1
UTCH	150	MSUTeach 150: STEP 2 – Inquiry-Based Lesson Design	1
UTCH	200	MSUTeach 200: Knowing and Learning in Science and Mathematics	3
UTCH	250	MSUTeach 250: Perspectives on Science and Mathematics	3
UTCH	300	MSUTeach 300: Classroom Interactions	3
UTCH	350	MSUTeach 350: Project-Based Instruction	3
UTCH	400	MSUTeach 400: Research Methods	3
UTCH	450	MSUTeach 450: Apprentice Teaching	12
		Choose two Advanced Biological Sciences Program Elective	
BIOL	317	Principles of Microbiology w/ Lab*	4
BIOL	318	Local Flora w/ Lab	3
BIOL	334	Entomology w/ Lab	3
BIOL	337	Comparative Anatomy w/ Lab	3
BIOL	338	Developmental Biology w/ Lab	4
BIOL	356	Conservation Biology	3
BIOL	357	Environmental Testing Methods w/ Lab	3
BIOL	380	Cell Biology w/ Lab*	3
BIOL	384	Pathologic Basis for Disease	3
BIOL	385	Neurobiology	3
BIOL	407	Invertebrate Zoology w/ Lab	3
BIOL	409	Limnology w/ Lab	3
BIOL	421	Biology of Ferns w/ Lab	3
BIOL	424	Immunology w/ Lab	3
BIOL	425	Animal Physiology w/ Lab	3
BIOL	426	Plant Physiology w/ Lab	3
BIOL	427	Pathogenic Microbiology w/ Lab	3
BIOL	428	Virology	3
BIOL	429	Histology w/ Lab	3
BIOL	431	Herpetology w/ Lab	3
BIOL	433	Ichthyology w/ Lab	4
BIOL	437	Ornithology w/ Lab	3
BIOL	438	Mammalogy w/ Lab	3
BIOL	443	General Parasitology w/ Lab	3
BIOL	446	Biotechnology w/ Lab	3
BIOL	447	Organ Systems Physiology	3
BIOL	449	Plant Anatomy w/ Lab	3

BIOL	451	Advanced Cell Biology	3
BIOL	452	Aquatic Entomology w/ Lab	3
BIOL	456	Plant Morphology w/ Lab	3
BIOL	473	Medical-Veterinary Entomology w/ Lab	4
BIOL	478	Animal Behavior	3
BIOL	480	History of Science	3
BIOL	490	Advanced Biochemistry	3

Total Track Hours	38-40

Program Track Name: Biological Sciences Area 4+1

Please list all Track Requirements

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
		Choose THREE Graduate Biology electives from the following:	
BIOL	607	Invertebrate Zoology w/ Lab	3
BIOL	609	Limnology w/ Lab	3
BIOL	610	Advanced Evolution	3
BIOL	621	Biology of Ferns	3
BIOL	624	Immunology w/ Lab	3
BIOL	627	Pathogenic Microbiology w/ Lab	3
BIOL	628	Virology	3
BIOL	629	Histology w/ Lab	3
BIOL	631	Herpetology w/ Lab	3
BIOL	633	Ichthyology w/ Lab	4
BIOL	637	Ornithology w/Lab	3
BIOL	638	Mammalogy w/ Lab	3
BIOL	643	General Parasitology w/ Lab	3
BIOL	646	Biotechnology w/ Lab	3
BIOL	647	Organ Systems Physiology	3
BIOL	649	Plant Anatomy w/ Lab	3
BIOL	651	Advanced Cell Biology	3
BIOL	652	Aquatic Entomology w/ Lab	3
BIOL	656	Plant Morphology w/ Lab	3
BIOL	673	Medical-Veterinary Entomology w/ Lab	4
BIOL	678	Animal Behavior	3
BIOL	680	History of Science	3
BIOL	690	Biochemistry	3

Total Track Hours	9-11

Free Electives:

Free General Electives are any course hours still necessary to meet the 120 hour degree requirement after all program requirements are met.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
Variable	Variable	Free Electives by Track	
		Biology Track	15-27
		MSUTeach Track	0-4
		4+1 Track	24-33

Total Free Elective Hours	0-33

TOTAL DEGREE HOURS (Total degree hours should equal 120 or contain a rationale as to why it cannot).	120

Rationale as to why program exceeds 120 hours (if applicable):

Only the MSUTeach track could be above 120 hours, depending upon what General Education and Track Elective courses are chosen.

If there is a change to the current catalog language for program competencies, admission criteria, standardized testing requirements, etc., please list the NEW catalog language below. Do not list the old catalog language. Do not list the program courses again.

Curriculum Map – (Biological Sciences Area Bachelor of Science Biology Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I
HUM II
SBS I
SBS II
NSC I
NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	FYS 101	G	3		BIOL 210	P R	4
	ENG 100	G	3		BIOL 210L	P R	0
	MATH 152 (must also take MATH 141) or MATH 174 or MATH 175	G P R	3-4		MATH 141 or Free Elective	P R S	3
	BIOL 171	G P R	4		CHEM 111	G P S	4
	BIOL 171L	G P R	0		CHEM 111L	G P S	0
	HUM I – Humanities Elective	G	3		COM 108	G	3
	Total Credit Hours		16-17		**Total Credit Hours**		14

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	BIOL 215	P R	4		BIOL 304	P R U	3
	BIOL 215L	P R	0		BIOL 304L	P R U	0
	CHEM 112	P S R	4		MATH 353 or MATH 365	P R U	3
	CHEM 112L	P S R	0		PHYS 201 or PHYS 231	P R	4 or 5
	ENG 200	P G	3		HUM II – Humanities Elective	G	3
	SBS I – Social/Behavioral Sci. Elec.	G	3		SBS II – Social/Behavioral Sci. Elec.	G	3
	Total Credit Hours		14		**Total Credit Hours**		16

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	BIOL 317 or BIOL 380	P R U	4		BIOL/CHEM 301	P R U	4
	BIOL 317L or BIOL 380L	P R U	0		BIOL/CHEM 301L	P R U	0
	CHEM 326	P S U	4		Advanced BIOL Elective	P R U	3
	CHEM 326L	P S U	0		Advanced BIOL Elective	P R U	3
	PHYS 202 or PHYS 232 or ESS 108 or CHEM 327	P R	3 - 5		General Electives	E	6
	General Elective	E	3				
	Total Credit Hours		14-16		**Total Credit Hours**		16

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	BIOL 461	P R U	3		BIOL 499D	G P R U	3
	BIOL 461L	P R U	0		Advanced BIOL Elective	P R U	3
	Advanced BIOL Elective	P R U	3		General Electives	E	4-5
	Advanced BIOL Elective	P R U	3		Advanced General Elective	E P U	3
	General Electives	E	6				
	Total Credit Hours		15		**Total Credit Hours**		13-14

(E) Elective
(G) General Education Course
(P) Pre-requisite
(R) Required Course
(U) Upper Division Course 300-400 level (you must have 42 hours)

Curriculum Map – (Biological Sciences Area Bachelor of Science MSUTeach Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I	SBS I	NSC I
HUM II	SBS II	NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	FYS 101	G	3		BIOL 210	P R	4
	ENG 100	G	3		BIOL 210L	P R	0
	MATH 152 (must also take MATH 141) or MATH 174 or MATH 175	G P R	3-4		MATH 141 or Free Elective	P R S	3
	BIOL 171	G P R	4		CHEM 111	G P R	4
	BIOL 171L	G P R	0		CHEM 111L	G P R	0
	SBS I – Social/Behavioral Sci. Elec.	G	3		COM 108	G	3
	UTCH 100 – MSUTeach: STEP 1	T	1		UTCH 150 – MSUTeach: STEP 2	P T	1
	Total Credit Hours		17-18		**Total Credit Hours**		15

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	BIOL 215	P R	4		BIOL 304	P R U	3
	BIOL 215L	P R	0		BIOL 304L	P R U	0
	CHEM 112	P R	4		PHYS 201 or PHYS 231	P R	4 or 5
	CHEM 112L	P R	0		HUM II – Humanities Elective	G	3
	ENG 200	P G	3		SBS II – Social/Behavioral Sci. Elec.	G	3
	HUM I – Humanities Elective	G	3		UTCH 250 – MSUTeach: Perspectives on Science and Mathematics	P T	3
	UTCH 200 – MSUTeach: Knowing & Learning	P T	3				
	Total Credit Hours		17		**Total Credit Hours**		16

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	BIOL 317 or BIOL 380	P S U	4		BIOL/CHEM 301	P R U	4
	BIOL 317L or BIOL 380L	P S U	0		BIOL/CHEM 301L	P R U	0
	CHEM 326	P S U	4		Advanced BIOL Elective	P S U	3
	CHEM 326L	P S U	0		MATH 353 or MATH 365	P S U	3
	PHYS 202 or PHYS 237 or ESS 108 or CHEM 327	P R	3 - 5		BIOL 155	P R U	3
	UTCH 300 – MSUTeach: Classroom Interactions	P T U	3		UTCH 350 – MSUTeach Project-Based Instruction	P T U	3
	Total Credit Hours		15		**Total Credit Hours**		16

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	BIOL 461	P R U	3		UTCH 450 – MSUTeach: Apprentice Teaching	P T U	12
	BIOL 461L	P R U	0				
	BIOL 499D	G P R U	3				
	Advanced BIOL Elective	P R U	3				
	Advanced BIOL Elective	P R U	3				
	UTCH 400 – MSUTeach: Research Methods	P T U	3				
	Total Credit Hours		15		**Total Credit Hours**		12

(E) Elective (G) General Education Course
(P) Pre-requisite (R) Required Course
(U) Upper Division Course 300-400 level (you must have 42 hours)

Curriculum Map – (Biological Sciences Area Bachelor of Science 4+1 Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I
HUM II
SBS I
SBS II
NSC I
NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	FYS 101	G	3		BIOL 210	P R	4
	ENG 100	G	3		BIOL 210L	P R	0
	MATH 152 (must also take MATH 141) or MATH 174 or MATH 175	G P R	3-4		MATH 141 or Free Elective	P R S	3
	BIOL 171	G P R	4		CHEM 111	G P S	4
	BIOL 171L	G P R	0		CHEM 111L	G P S	0
	HUM I – Humanities Elective	G	3		COMS 108	G	3
	Total Credit Hours		16-17		**Total Credit Hours**		14

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	BIOL 215	P R	4		BIOL 304	P R U	3
	BIOL 215L	P R	0		BIOL 304L	P R U	0
	CHEM 112	P S R	4		MATH 353 or MATH 365	P R U	3
	CHEM 112L	P S R	0		PHYS 201 or PHYS 231	P R	4 or 5
	ENG 200	P G	3		HUM II – Humanities Elective	G	3
	SBS I – Social/Behavioral Sci. Elec.	G	3		SBS II – Social/Behavioral Sci. Elec.	G	3
	Total Credit Hours		14		**Total Credit Hours**		16-17

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	BIOL 317 or BIOL 380	P R U	4		BIOL/CHEM 301	P R U	4
	BIOL 317L or BIOL 380L	P R U	0		BIOL/CHEM 301L	P R U	0
	CHEM 326	P S U	4		Advanced BIOL Elective	P R U	3
	CHEM 326L	P S U	0		BIOL 461	P R U	3
	PHYS 202 or PHYS 232 or ESS 108 CHEM 327	P R	3 - 5		BIOL 461L	P R U	0
	General Elective	E	3		General Electives	E	6
	Total Credit Hours		15-16		**Total Credit Hours**		16

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	Graduate BIOL Elective	P R Gr	3		BIOL 499D	G P R U	3
	Graduate BIOL Elective	P E Gr	3-4		Graduate BIOL Elective	P E Gr	3-4
	General Electives	E	3-6		Graduate BIOL Elective	P E Gr	3-4
	Advanced General Elective	E U	3-4		General Electives	E	3-6
	Total Credit Hours		12-17		**Total Credit Hours**		12-17

(E) Elective
(G) General Education Course
(P) Pre-requisite
(R) Required Course
(U) Upper Division Course 300-400 level (you must have 42 hours)

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form
January 2018

Program: (as listed in current catalog)	Biomedical Sciences Area Bachelor of Science
Department: (as listed in current catalog)	Biology and Chemistry
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Charles Lydell (✓) Approved ( ) Disapproved 10/31/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GROPPE (✓) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) Date

WAYNE MILLER (✓) Approved ( ) Disapproved 11/15/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

DEPT Kurt Gibbs (✓) Approved ( ) Disapproved 10/31/19

Undergraduate Curriculum Committee (Sign and Print) Laurie Conch 12/16/19 Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

higher) of hours as the track. For example, a Major could have 15 hours in core, 9 hours in the track, and 6 hours as program electives.

7. Any proposal with a secondary education component must be routed through the Teacher Education Council.

8. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☐	If an Information Technology signature is required, it has been obtained.	☐ N.A.
☐	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐ N.A.
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☐	The title, department, and college names correspond to the current catalog.	☑
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☐	Responses are complete and applicable for each question.	☑
☐	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☐	Each course has been reviewed for pre-requisites, co-requisites or testing requirements. There are no hidden pre-requisites, co-requisites, or testing requirements.	☑
☐	The program core contains at least 50% of the total program hours (not including general education and free elective hours)	☑
☐	The program core does not contain courses that should be listed in other sections of the proposal (i.e. Other Program Required Hours, Program Electives, etc.).	☑
☐	The program has an adequate number of area/major hours (minimum of 48 for area and minimum 30 for major).	☑
☐	The program has at least 42 upper division hours.	☑
☐	If the program is a major, hours are designated for an accompanying minor.	☑ N.A.
☐	If the program has tracks, the total track hours do not exceed the total core hours.	☑
☐	The program has a maximum of 120 hours. If not, sufficient rationale is included in the proposal.	☑
☐	The curriculum maps each start on a separate page.	☑

☐	The curriculum map contains the official name of the program and track (if applicable).	☑
☐	The curriculum map contains accurate course prefix, number, and name for each course.	☑
☐	The curriculum map lists General Education courses in the first two years.	☑
☐	If the program has tracks, a separate curriculum map is included for each track.	☑
☐	The curriculum map contains EXACTLY the same courses and the same number of credit-hours as the proposal.	☑
☐	The curriculum map does not contain hidden pre-requisites or co-requisites.	☑
☐	The curriculum map codes are accurate.	☑
☐	The total credit hours for each semester are acceptable (full-time, not overload, etc.).	☑
☐	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Approval Date

Department Curriculum Committee Chair (Sign and Print) — Approval Date

10.28.19

PROGRAM
Major Revision of Existing Program

The outline below is to be used for program revisions. Each revised or new course included in this program requires a separate "New Course or Major Revision to Existing Course" proposal. *Note: an amended curriculum map must be attached to each "Major Revision of Existing Program" proposal.*

I. EXISTING PROGRAM REVISION

State the current title of the Program (as listed in the current catalog).

Biomedical Sciences Area Bachelor of Science

List the degree (e.g. Bachelor of Science) and major or area (e.g. Math Major, Biology Area); as listed in the current catalog. Include tracks if applicable (e.g. Bachelor of Arts, Philosophy Major, Religious Studies Track).

Biomedical Sciences Area Bachelor of Science Biomedical Track, Biomedical Sciences Area Bachelor of Science 4+1 Track

State the proposed revised title of the Program (if applicable)

N/A

If the degree (e.g. Bachelor of Science) and/or major or area (e.g. Math Major, Biology Area) names are changing, please list them below. Include tracks if applicable.

N/A

CIP Code - ***Contact your department chair to verify the correct CIP Code information.***

26.0101 Biology/Biological Sciences, General

II. NEED AND JUSTIFICATON

A. Describe the changes and justify what this proposal is requesting; what are you doing and why are you doing it?

The proposed changes are to remedy problems experience by our double majors (ex. Biology & Physics dual major) who have been required to take redundant courses in the past to satisfy both majors' requirements and at the same time, offer additional flexibility to Biomedical Science majors. Therefore, we propose to add as an either/or option Physics 231 & 232 (calculus-based physics) to the existinng Physics 201 & 202 (algebra-based physics) requirement, and MATH 353 as an either/or with MATH 365 to remedy this problem.

B. Have the admission requirements changed? If so, how?

No

C. If a similar program exists at MSU or in Kentucky, identify that program and provide justification for the duplication.

There are no other similar programs at MSU. Western Kentucky University has similar program (JUMP) for biology majors. Offering the program at Morehead State will provide opportunities for highly motivated students to earn two degrees (B.S. Biomedical Sciences and M.S. Biology).

III. PURPOSE, GOALS, AND OBJECTIVES

A. What are the goals and objectives of this proposal?

The proposed changes are to remedy problems experience by our double majors (ex. Biology & Physics dual major) who have been required to take redundant courses in the past to satisfy both majors' requirements.

B. State the revised program outcomes or competencies to be achieved by students.

There is no revision to the program outcomes or competencies to be achieved by students.

C. How do the specific goals and objectives relate to the mission statement of the University?

The Biomedical Sciences program is designed to provide strong foundations for the development of professionals in the biological disciplines. As a community of learners committed to individual achievement, our mission is to educate students for success in a global evironment. The Biomedical Sciences program supports this success by establising and maintaining high standards for all students enrolled in the program. Specifically, students will (1) develop a fundamental knowledge base in the diverse disciplines of biology (Biological Knowledge); and (2) develop skills in laboratory settings in the appropriate application of the Scientific method.

Biological Knowledge – a comprehensive exam is administered to students during the capstone course to assess student knowledge in the following subject areas: Genetics, Microbiology, Biochemistry, Cell Biology, and Anatomy and Physiology.

Scientific Method – the following course-embedded assessment activities are utilized to assess student understanding of the scientific method and performance of laboratory skills: Micropipetting, Graphing, Gram staining and Microscopy, and DNA Sequence Analysis.

D. List the methods of program assessment to be used, other than course grades, to ensure that the desired outcomes or competencies are attained by students. Indicate the frequency of assessment and how results will be made available to program faculty.

For Biomedical Sciences, the following will be used to evaluate competency:
1. Departmental Exit Examination scores. This is a multiple choice exam offered once during the capstone course.
2. Laboratory skills performance assessments administered in selected Program core biology courses. These assessments occur twice in BIOL 317, and once each in BIOL 301 and BIOL 304. All performance assessments are scored against developed rubrics.
For 1 and 2, results are compiled into an annual WEAVE report that will be distrubuted to the BIOC faculty.
3. Performance of graduates on entrance examinations to post-baccalaureate programs (GRE, MCAT, PCAT, DAT).
4. Employer feedback.
5. Graduate feedback.

E. List discipline-specific standards for accreditation in addition to Southern Association of Colleges and Schools (SACS) accreditation standards. If applicable, attach a current statement of requirements.

N/A

IV. IMPACT

A. How will the program changes affect transfer students?

Transfer students should not be affected as most community colleges and universities offer programs of study in biology. We are in the process of developing a degree pathway as a part of the Kentucky Council of Post Secondary Education's KnowHow2Transfer initiative to make transferring to Morehead State University a smoother transition.

B. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

a. offers required courses for this program
b. offers elective courses for this program
c. offers similar courses in their program
d. has an equated course
e. has courses in this proposal listed as a co-requisite or pre-requisite
f. shares staff and/or resources

C. Explain the potential impact on the other departments and programs.

No other programs or departments will be impacted.

D. List each of the individuals in the other departments and programs notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

N/A

E. Does this program revision require new technology? Please note that Information Technology (GH 110) should be notified when the program proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** ☒ **No** **(If yes, a representative from Information Technology must sign the signature sheet.)**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server based license for the software. (IT does not install individual packages in labs, only server based versions).**

2. **the type of hardware to be utilized.**

V. PERSONNEL

A. List name(s), qualifications including highest earned degree, and academic rank(s) of departmental

faculty who will teach courses in this program.

Dr. Darrin DeMoss, Ph.D., Professor
Dr. David Eisenhour, Ph.D., Professor
Dr. Mike Fultz, Ph.D., Professor
Dr. Geoff Gearner, Ph.D., Professor
Dr. Kurt Gibbs, Ph.D., Associate Professor
Dr. Janelle Hare, Ph.D., Professor
Dr. Charles Lydeard, Ph.D., Professor
Ms. Malinda McMurry, M.S., Instructor
Dr. Melissa Mefford, Ph.D., Assistant Professor
Dr. Sean O'Keefe, Ph.D., Associate Professor
Dr. David Peyton, Ph.D., Professor
Dr. Brian Reeder, Ph.D., Professor
Dr. Allen Risk, Ph.D., Professor
Dr. David Smith, Ph.D., Associate. Professor
Dr. Craig Tuerk, Ph.D., Professor

B. Identify external or adjunct faculty, if appropriate.

N/A

C. List any additional support personnel (clerical, laboratory assistants, and technicians) needed for implementation.

N/A

D. List additional faculty including academic rank and qualifications, who must be employed during the next four years if this is implemented.

N/A

VI. ADDITIONAL INFORMATION

A. Identify the enrollment and number of graduates from this program for the past four years

You should adjust the years to include 2016-2017 and 2017-2018

Previous Four Years	Enrollment	Graduation
2018-2019	320	60
2017-2018	346	58
2016-2017	342	60
2015-2016	366	49

Enrollment in the Master of Science Biology degree program by academic year

Previous Four Years	Enrollment	Graduation
2018-2019	5	1
2017-2018	7	3
2016-2017	11	2
2015-2016	8	4

B. List anticipated enrollment and number of graduates from this program for the next four years.

The enrollment and graduate projections are for both traditional M.S. Biology and Biomedical 4+1 students. The numbers in parenthesis indicate just the Biomedical 4+1 projection.

Next four years	Enrollment	Graduation
2019-2020	325	50
2020-2021	325	55
2021-2022	330	60
2022-2023	330	60

Master of Science Biology degree program

Next Four Years	Enrollment	Graduation
2019-2020	5 (3)	2 (2)
2020-2021	10 (4)	7 (3)
2021-2022	18 (4)	8 (4)
2022-2023	18 (4)	8 (4)

C. Explain any additional or remodeled facilities that will be required.

N/A

D. List any additional equipment required.

N/A

E. Provide the estimated additional cost required to support this program for the next four years. Identify source of new funds (special legislative request, system reallocation, etc.).

N/A

VII. PROPOSED PROGRAM REQUIREMENTS

Please use the template below to list all Program courses. To create additional lines, tab while cursor is in the last "Course Hours" field.

Example of different types of entries. Not all programs, minors or certificates will have each type of entry.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MSU	300	Name of course	3
MSU	400	Name of variable hour course	1-3
Variable		Free Electives	9

General Education

If the Program requires specific general education courses, list them here. These courses should NOT have hours listed again in the Program requirements (e.g. exchange courses, capstone, etc.) Remaining hours should be listed with "variable" as course prefix and "General Education" as course name with the total remaining General Education hours in course hours.

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
MATH	152	College Algebra (students who choose this option must also complete MATH 141) OR	3
MATH	174	Pre-Calculus OR	4
MATH	175	Calculus	4
BIOL	171	Principles of Biology I w/lab (NSC I Exchange)	4
CHEM	111	Principles of Chemistry I w/lab (NSC II Exchange)	4
BIOL	499E	Current Issues in Biomedical Sciences (Capstone)	3
Variable		General Education	24

Total General Education Hours	38-39

Program Core Hours

Program Core courses must be taken by all students in the program. This section cannot contain options such as "MSU 111 or MSU 112" or "choose 3 hours from the following list". Any core Track hours should be listed in the Track section.

Course	**Number**	**Course Name**	**Course**

Prefix (Example: ENG)	(Example: 100)		Hours
BIOL	301	Biochemistry w/Lab	4
BIOL	304	Genetics w/Lab	3
BIOL	317	Principles of Microbiology w/ Lab	4
BIOL	380	Cell Biology w/ Lab	3
CHEM	112	Principles of Chemistry II w/ Lab	4
CHEM	326	Organic Chemistry I w/ Lab	4

Total Program Core Hours (This total should be at least 50% or more of the Total Program Hours; not including General Education hours and free elective hours).	22

Other Program Required Hours

Other Program Required Hours are required program courses with the option of choosing between two specific courses (i.e. "MSU 111 or MSU 112"). Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
		Students who elect to take MATH 152 as the general education MATH must also take MATH 141 – not required for students who take MATH 174 or MATH 175 as the general education course.	
MATH	141	Trigonometry	0-3
		All students – choose ONE from the following	
PHYS	201	Physics I w/ Lab	4
PHYS	231	Engineering Physics I w/ Lab	5
		All students – choose ONE from the following	
PHYS	202	Physics II w/ Lab	4
PHYS	232	Engineering Physics II w/ Lab	5
		All students – choose ONE from the following	
MATH	353	Statistics	3
MATH	365	Intro to Mathematical Statistics	3

Total Other Program Required Hours	11-16

Program Electives

Program Electives are a list of required program-related courses from which a student chooses a specific number of hours. (e.g. "choose 3 hours from the following list"). Track electives should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours

Total Program Elective Hours	0

IF YOUR PROGRAM DOES NOT HAVE TRACKS, PLEASE PROCEED TO THE FREE ELECTIVE SECTION BELOW.

***Please note: If you need more than three tracks, please contact *undergraduate@moreheadstate.edu* so that the forms can be revised to fit your needs.**

Program Track Name: Biomedical Track			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
		Choose 26 hours from the following	
BIOL	199	Selected Workshop Topics	1-4
BIOL	244	Human Anatomy and Physiology I	3
BIOL	244A	Human Anatomy and Physiology I Lab	1
BIOL	245	Human Anatomy and Physiology II	3
BIOL	245A	Human Anatomy and Physiology II Lab	1
BIOL	337	Comparative Anatomy	3
BIOL	338	Developmental Biology	4
BIOL	384	Pathologic Basis of Disease	3
BIOL	385	Neurobiology	3
BIOL	399	Selected Workshop Topics	1-4
BIOL	424	Immunology	3
BIOL	425	Animal Physiology	3
BIOL	427	Pathogenic Microbiology	3
BIOL	428	Virology	3
BIOL	429	Histology	3
BIOL	443	General Parasitology	3
BIOL	444	Clinical Laboratory Procedures	3
BIOL	446	Biotechnology	3
BIOL	447	Organ Systems Physiology	3
BIOL	451	Advanced Cell Biology	3
BIOL	473	Medical-Veterinary Entomology	4
BIOL	476	Special Problems	1-6
BIOL	490	Biochemistry	3
BIOL	493	Laboratory Techniques in Biochemistry	2
BIOL	499D	Principles of Evolution	3
CHEM	327	Organic Chemistry II	4

Total Track Hours	26

Program Track Name: 4 + 1 Track			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
		Choose 26 Hours from the following approved electives, including three 600-level graduate courses	
BIOL	199	Selected Workshop Topics	1-4
BIOL	244	Human Anatomy I	3
BIOL	244A	Human Anatomy I Lab	1
BIOL	245	Human Anatomy II	3
BIOL	345A	Human Anatomy II Lab	1
BIOL	337	Comparative Anatomy	3
BIOL	338	Developmental Biology	4
BIOL	384	Pathologic Basis of Disease	3
BIOL	385	Neurobiology	3
BIOL	399	Selected Workshop Topics	1-4
BIOL	425	Animal Physiology	3
BIOL	444	Clinical Laboratory Procedures	3
BIOL	476	Special Problems	1-6
BIOL	493	Laboratory Techniques in Biochemistry	2
BIOL	499D	Principles of Evolution	3
CHEM	327	Organic Chemistry II	4
BIOL	424	Immunology OR	3
BIOL	624	Immunology	3
BIOL	427	Pathogenic Microbiology OR	3
BIOL	627	Pathogenic Microbiology	3
BIOL	428	Virology OR	3
BIOL	628	Virology	3
BIOL	429	Histology OR	3
BIOL	629	Histology	3
BIOL	443	General Parasitology OR	3
BIOL	643	General Parasitology	3
BIOL	446	Biotechnology OR	3
BIOL	646	Biotechnology	3
BIOL	447	Organ Systems Physiology OR	3
BIOL	647	Organ Systems Physiology	3

BIOL	451	Advanced Cell Biology OR	3
BIOL	651	Advanced Cell Biology	3
BIOL	473	Medical-Veterinary Entomology OR	4
BIOL	673	Medical-Veterinary Entomology	4
BIOL	490	Biochemistry OR	3
BIOL	690	Biochemistry	3
		Biology courses taken for undergraduate credit may not also be taken for Biology Graduate credit.	

Total Track Hours	26

Program Track Name:			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**

Total Track Hours	

Free Electives:			
Free Electives are any course hours still necessary to meet the 120-hour degree requirement after all program requirements are met.			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
Variable	Variable	Free Electives	23

Total Free Elective Hours	17-23

TOTAL DEGREE HOURS (Total degree hours should equal 120 or contain a rationale as to why it cannot).	120
Rationale as to why program exceeds 120 hours (if applicable):	
If there is a change to the current catalog language for program competencies, admission criteria, standardized testing requirements, etc., please list the NEW catalog language below. Do not list the old catalog language. Do not list the program courses again.	

Curriculum Map – (Biomedical Sciences Bachelor of Science, Biomedical Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses that include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3-credit hour course from each of the following categories

HUM I
HUM II
SBS I
SBS II
NSC I
NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	FYS 101	G	3		Biological Sciences Elective (recommend BIOL 244 + 244A)	P E	4
	ENG 100	G	3		MATH 141 or General Elective	PR or E	3
	MATH 152 (must also take MATH 141) OR MATH 174, OR MATH 175	GPR	3-4		CHEM 111	GPR	4
	BIOL 171	GPR	3		CHEM 111 Lab	GPR	0
	BIOL 171L	GPR	1		COMS 108	G	3
	HUM I – Humanities	G	3				
	Total Credit Hours		16-17		**Total Credit Hours**		14

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	Biological Sciences Elective (recommend BIOL 245 + 245A)	PE	4		BIOL 301	PRU	4
	CHEM 112	PR	4		BIOL 301L	PRU	0
	CHEM 112L	PR	0		BIOL 317	PRU	4
	ENG 200	G	3		BIOL 317L	PRU	0
	SBS I Social Behavioral Science	G	3		SBS II Social/Behavioral Science	G	3
	BIOL 304	PRU	3		HUM II Humanities	G	3
	BIOL 304L	PRU	0				
Total Credit Hours			17	Total Credit Hours			14

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	BIOL 380	PRU	3		Biomedical Sciences Elective	PEU	3-4
	BIOL 380L	PRU	0		Biomedical Sciences Elective	PEU	3-4
	CHEM 326	PRU	4		MATH 353 or MATH 365	PRU	3
	CHEM 326L	PUR	0		PHYS 202 or PHYS 232	PR	4 or 5
	PHYS 201 or PHYS 231	PR	4 or 5				
	General Elective	E	3				
	Total Credit Hours		14		**Total Credit Hours**		13-15

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	Biomedical Science Elective	PEU	3-4		BIOL 499E	GPRU	3
	Biomedical Sciences Elective	PEGr	3-4		Biomedical Sciences Elective	PEGr	3-4
	General Elective	E	3		Biomedical Sciences Elective	PEGr	3-4
	General Elective	E	3		General Elective	E	3
					General Elective	EU	3
	Total Credit Hours		12-14		**Total Credit Hours**		15-17

(E) Elective, (G) General Education Course (S) Supplemental (Gr) Graduate Course
(P) Pre-requisite (R) Required Course (U) Upper Division Course 300-400 level (you must have 42 hours)

Curriculum Map – (Biomedical Sciences Bachelor of Science, 4 + 1 Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses that include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3-credit hour course from each of the following categories

HUM I
HUM II
SBS I
SBS II
NSC I
NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	FYS 101	G	3		Biomedical Sciences Elective (recommend BIOL 244 + 244A)	P E	4
	ENG 100	G	3		MATH 141 or General Elective	PR or E	3
	MATH 152 (must also take MATH 141) OR MATH 174, OR MATH 175	GPR	3-4		CHEM 111	GPR	4
	BIOL 171	GPR	3		CHEM 111 Lab	GPR	0
	BIOL 171L	GPR	1		COMS 108	G	3
	HUM I – Humanities	G	3				
	Total Credit Hours		16-17		**Total Credit Hours**		14

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	Biomedical Sciences Elective (recommend BIOL 245 + 245A)	PE	4		BIOL 301	PRU	4
	CHEM 112	PR	4		BIOL 301L	PRU	0
	CHEM 112L	PR	0		BIOL 317	PRU	4
	ENG 200	G	3		BIOL 317L	PRU	0
	SBS I Social Behavioral Science	G	3		SBS II Social/Behavioral Science	G	3
	BIOL 304	PRU	3		HUM II Humanities	G	3
	BIOL 304L	PRU	0				
Total Credit Hours			17	Total Credit Hours			14
	Total Credit Hours				**Total Credit Hours**		

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	BIOL 380	PRU	3		Biomedical Sciences Elective	PEU	3-4
	BIOL 380L	PRU	0		Biomedical Sciences Elective	PEU	3-4
	CHEM 326	PRU	4		MATH 353 or MATH 365	PRU	3
	CHEM 326L	PUR	0		PHYS 202 or PHYS 232	PR	4 or 5
	PHYS 201 or PHYS 231	PR	4 or 5				
	General Elective	E	3				
	Total Credit Hours				**Total Credit Hours**		

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	Biomedical Science Elective	PEU	3-4		BIOL 499E	GPRU	3
	Graduate Biomedical Sciences Elective	PE	3-4		Graduate Biomedical Sciences Elective	PE	3-4
	General Elective	E	3		Graduate Biomedical Sciences Elective	PE	3-4
	General Elective	E	3		General Elective	E	3
					Advanced General Elective	EU	3
	Total Credit Hours		12-14		**Total Credit Hours**		15-17

(E) Elective,
(P) Pre-requisite
(G) General Education Course
(R) Required Course
(S) Supplemental
(U) Upper Division Course 300-400 level (you must have 42 hours)

MINOR or CERTIFICATE

Minor Revision to an Existing Minor or Certificate
Undergraduate Curriculum Routing Form

Revised January 2019

Program: (as listed in current catalog)	Chemical Dependency Counseling Minor
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology
College (as listed in current catalog)	Caudill College of Arts, Humanties, and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.9.19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 10/31/2019

College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-13-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Green (✓) Approved ( ) Disapproved 12/4/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-4-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Chemical Dependency Counseling Minor
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology
College: (as listed in current catalog)	Caudill College of Arts, Humanties, and Social Sciences

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Dr. Monica Himes — M. Himes by D. Murphy — 10-22-19

Originator (Sign and Print) — Approval Date

Dr. Connie Hardesty — C Hardesty — 10-22-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

MINOR or CERTIFICATE

Minor Revision to an Existing Minor or Certificate

The following outline is to be used to report a minor modification of a previously approved minor or certificate. *If the program content or method of instruction is to be modified, use the "Major Revision of a Minor or Certificate" form.* Minor changes may include a change in program title or minor admission or completion requirements which *do not modify program content*. Please list each program change on a separate proposal form.

I. MINOR OR CERTIFICATE INFORMATION

State the current title of the program **(as listed in the current catalog)**

Chemical Dependency Counseling Minor

State the proposed revised title of the program (if applicable)

CIP Code - ***Contact your department chair or associate dean to verify the correct CIP code information.***

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what you are doing and why are you doing it? Content will be listed at the end of the document.

The requirement for completion of the minor will be changed. Currently, students can earn a D in the courses required for the minor and still complete the minor. This proposed change is that students must earn a grade of C or better in all courses required for the minor, in order to earn the minor.

B. Program *coherence* refers to 1)appropriate sequencing of courses, not a mere bundling of credits, so that 2)student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Describe any impacts to coherence that the proposed revisions to the program may have.

There are no known impacts to program coherence that this proposal would cause.

C. Do the proposed changes impact the program's alignment with the program's mission and goals and/or the University's mission and goals? If yes, explain.

The proposed change is in alignment with the social work program's expectations and requirements, where all students currently must earn a grade of C or better in core social work courses in order for the course to count towards the social work major. For students entering a helping profession where they will be serving vulnerable populations, it is important for them to learn the material in these courses and to demonstrate an adequate level of mastery.

D. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. offers required courses for this program**
- **b. offers elective courses for this program**
- **c. offers similar courses in their program**
- **d. has an equated course**
- **e. has courses in this proposal listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources.**

There is no known impact on other departments and programs.

E. Explain the potential impact on the other departments and programs.

There is no known impact on other departments and programs.

F. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

G. If this is a change that affects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

Students must earn a "C" or higher in all of the courses listed in order to earn a minor in Chemical Dependency Counseling.

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form
Revised January 2019

MOREHEAD STATE UNIVERSITY

Program: (as listed in current catalog)	Convergent Media Area - Bachelor of Arts
Department: (as listed in current catalog)	Communication, Media and Languages
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Lorraine Nuyo (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott (X) Approved ( ) Disapproved 11/12/19

College Curriculum Committee (Sign and Print) Date

[signature] (✓) Approved ( ) Disapproved 11-21-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) Date

[signature] (✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Convergent Media Area - Bachelor of Arts
Department: (as listed in current catalog)	Communication, Media and Languages
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

Helpful Information:

1. Important Definitions Used in the Curriculum Process
   - Area = a program of study comprised of at least 48 hours
   - Major = a program of study comprised of at least 30 hours, accompanied by a minor
   - Minor = a set of discipline-specific courses of at least 21 hours
   - Certificate = a series of courses related to a specific topic or skill with a prescribed number of hours. For additional information contact the Office of Academic Programs at 783-2003 or email undergraduate@moreheadstate.edu.
   - Core = a set of required courses taken by all students in a specific Area or Major
   - Track = a subset of courses within an area or major designed to develop expertise in a particular topic at the undergraduate level
   - Equated courses vs. cross-listed courses = equated courses are courses of identical content that have different prefixes (and are approved through the undergraduate curriculum process), whereas cross-listed courses have the same instructor and are offered at the same time/location.
   - Pre-requisite = course(s) that a student must successfully complete prior to registering for a more advanced course.
   - Co-requisite = course(s) that a student must take concurrently with another course.
2. An Associate's Degree normally requires at least 60 semester hours including 15 hours of prescribed general education credit.
3. A baccalaureate degree program at the undergraduate level is either an Area or a Major.
4. A program's total credit hours include program core (i.e., courses taken by all students in the program), program supplemental courses (other required hours), and program specific electives. No general education courses or free elective courses count toward total program hours.
5. Curriculum should be designed so that the program's total credit hours plus general education hours and free electives add up to 120 total hours, with 42 of the hours in upper division (i.e., 300- to 400-level) courses.
6. To ensure that students enrolled in a program have common experiences fifty percent (50%) of a program's total credit hours must be made up of core courses.
   Examples:
   a. If an Area is designed with 48 hours, then 24 or more of those hours must be in core courses. The rest of the program hours can be other program requirements that vary from student to student.
   b. If a Major is designed with 30 hours, then 15 or more of those hours must be in core courses. The remainder of the major hours can be other program supplemental courses and program specific electives that vary from student to student. The minor is not considered in calculations for this 50% rule.
   c. If a Major has 30 hours and includes tracks, the core must contain at least the same number (or

higher) of hours as the track. For example, a Major could have 15 hours in core, 9 hours in the track, and 6 hours as program electives.

7. Any proposal with a secondary education component must be routed through the Teacher Education Council.

8. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If an Information Technology signature is required, it has been obtained. not required	☐
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained. not required	☐
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	Each course has been reviewed for pre-requisites, co-requisites or testing requirements. There are no hidden pre-requisites, co-requisites, or testing requirements.	☑
☑	The program core contains at least 50% of the total program hours (not including general education and free elective hours)	☑
☑	The program core does not contain courses that should be listed in other sections of the proposal (i.e. Other Program Required Hours, Program Electives, etc.).	☑
☑	The program has an adequate number of area/major hours (minimum of 48 for area and minimum 30 for major).	☑
☑	The program has at least 42 upper division hours.	☑
☑	If the program is a major, hours are designated for an accompanying minor.	☑
	If the program has tracks, the total track hours do not exceed the total core hours.	
☑	The program has a maximum of 120 hours. If not, sufficient rationale is included in the proposal.	☑
☑	The curriculum maps each start on a separate page.	☑
☑	The curriculum map contains the official name of the program and track (if applicable).	☑
☑	The curriculum map contains accurate course prefix, number, and name for each course.	☑
☑	The curriculum map lists General Education courses in the first two years.	☑

☑	If the program has tracks, a separate curriculum map is included for each track.	☑
☑	The curriculum map contains EXACTLY the same courses and the same number of credit-hours as the proposal.	☑
☑	The curriculum map does not contain hidden pre-requisites or co-requisites.	☑
☑	The curriculum map codes are accurate.	☑
☑	If the program has tracks, a separate curriculum map is included for each track.	☑
☑	The total credit hours for each semester are acceptable (full-time, not overload, etc.).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Jeffrey Hill — 10/31/2019

Originator (Sign and Print) — Approval Date

GARY B LAFLEUR — 10/31/2019

Department Curriculum Committee Chair (Sign and Print) — Approval Date

PROGRAM
Major Revision of Existing Program

The outline below is to be used for program revisions. Each revised or new course included in this program requires a separate "New Course or Major Revision to Existing Course" proposal. *Note: an amended curriculum map must be attached to each "Major Revision of Existing Program" proposal.*

I. EXISTING PROGRAM REVISION

State the current title of the Program (as listed in the current catalog)

Convergent Media Area - Bachelor of Arts

List the degree (e.g. Bachelor of Science) and major or area (e.g. Math Major, Biology Area); as listed in the current catalog. Include tracks if applicable (e.g. Bachelor of Arts, Philosophy Major, Religious Studies Track).

Bachelor of Arts - Convergent Media Area

State the proposed revised title of the Program (if applicable)

If the degree (e.g. Bachelor of Science) and/or major or area (e.g. Math Major, Biology Area) names are changing, please list them below. Include tracks if applicable.

n/a

CIP Code - ***Contact your department chair to verify the correct CIP Code information.***

B 09.0199

II. NEED AND JUSTIFICATON

A. Describe the changes and justify what this proposal is requesting; what are you doing and why are you doing it?

The CVM area is wanting to offer CVM 205 Introduction to Photojournalism as an elective to the current block of 5 electives. The CVM area feels this will offer students a better opportunity to focus his/her program.

B. Program *coherence* refers to 1) appropriate sequencing of courses, not a mere bundling of credits, so that 2) student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Describe any impacts to coherence that the proposed revision to the program may have.

Ultimately this addition will afford students a foundation in journalism that has previously not been available, if that is what they desire.

C. Have the admission requirements changed? If so, how?

n/a

D. If a similar program at MSU or in Kentucky exists, provide justification for the duplication.

n/a

III. PURPOSE, GOALS, AND OBJECTIVES

A. What are the goals and objectives of this proposal? How do the proposed changes impact the program's alignment with the program's mission and goals, and/or the University's mission and goals?

The goal is to add the elective CVM 205 Introduction ot Photojournalism to a block within the BA area in CVM. The objective is to offer students a more varied selection of electives. The overall goals of the program have not changed, nor its alignment with the university's goals.

B. State the revised program outcomes or competencies to be achieved by students.

n/a

C. How do the specific goals and objectives relate to the mission statement of the University?

The course will: Educate Students for success in a global environment; and Foster innovation, collaboration and creative thinking.

D. List the methods of program assessment to be used other than course grades to ensure that the desired outcomes or competencies are attained by students. Indicate the frequency of assessment and how results will be made available to program faculty.

The CVM area already has program assessment in place. This additional class within a set of electives will not impact the assessment process.

E. List discipline-specific standards for accreditation in addition to Southern Association of Colleges and Schools (SACS) accreditation standards. If applicable, attach current statement of requirements.

n/a

IV. IMPACT

A. How will the program changes affect transfer students?

n/a

B. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

a. offers required courses for this program
b. offers elective courses for this program
c. offers similar courses in their program
d. has an equated course
e. has courses in this proposal listed as a co-requisite or pre-requisite
f. shares staff and/or resources.

None. This elective is simply an additional class offered within our department for our program, so other programs and departments are not affected.

C. Explain the potential impact on the other departments and programs.

None.

D. List the individuals in the other departments and programs notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

None.

E. Does this program revision require new technology? Please note that Information Technology (GH 110) should be notified when the program proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** ☒ **No** **(If yes, a representative from Information Technology must sign the signature sheet.)**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server based license for the software. (IT does not install individual packages in labs, only server based versions).**

2. **the type of hardware to be utilized.**

V. PERSONNEL

A. List name(s), qualifications including highest earned degree, and academic rank(s) of departmental faculty who will teach courses in this program.

John Flavell. M.A. Instructor.

B. Identify external or adjunct faculty, if appropriate.

n/a

C. List any additional support personnel (clerical, laboratory assistants, and technicians) needed for implementation.

None

D. List additional faculty including academic rank and qualifications, who must be employed during the next four years if this is implemented.

None.

VI. ADDITIONAL INFORMATION

A. Identify the enrollment and number of graduates from this program for the past four years

(KEY = Year - Enrollment/Graduated) 2015 - 128/22; 2016 - 126/28; 2017 - 116/26; 2018 - 102/25.

B. List anticipated enrollment and number of graduates from this program for the next four years.

(KEY = Year - Enrollment/Graduated) 2019 - 110/27; 2020 - 115/28; 2021 - 120/29; 2022 - 125/30.

C. Explain any additional or remodeled facilities that will be required.

None.

D. List any additional equipment required.

None.

E. Provide the estimated additional cost required to support this program for the next four years. Identify source of new funds (special legislative request, system reallocation, etc.).

None.

VII. PROPOSED PROGRAM REQUIREMENTS

Please use the following template to list all Program courses. To create additional lines, tab while cursor is in the last "Course Hours" field.

Example of different types of entries. Not all programs, minors or certificates will have each type of entry.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MSU	300	Name of course	3
MSU	400	Name of variable hour course	1-3
Variable		Free Electives	9

General Education

If the Program requires specific general education courses list them here. These courses should NOT have hours listed again in the Program requirements. (e.g. exchange courses, capstone, etc.) Remaining hours should be listed with "variable" as course prefix and "General Education" as course name with the total remaining general education hours in course hours.

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**

Total General Education Hours	

Program Core Hours

Program Core courses must be taken by all students in the program. This section cannot contain options such as "MSU 111 or MSU 112" or "choose 3 hours from the following list". Any core Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours

Total Program Core Hours (This total should be at least 50% or more of the Total Program Hours; not including general education hours and free elective hours).	

Other Program Required Hours

Other Program Required Hours are required program courses with the option of choosing between two specific courses (i.e. "MSU 111 or MSU 112"). Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours

Total Other Program Required Hours	

Program Electives

Program Electives are a list of required program-related courses from which a student chooses a specific number of hours. (e.g. "choose 3 hours from the following list"). Track electives should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
CVM	205	Introduction to Photojournalism	3
CVM	301	News Writing and Reporting	3
CVM	320	Feature and Documentary Writing	3 3
CVM	358	Sports Writing	3
CVM	401	Advanced Multimedia News	3
CVM	465	Opinion Writing	3

Total Program Elective Hours	6

IF YOUR PROGRAM DOES NOT HAVE TRACKS, PLEASE PROCEED TO THE FREE ELECTIVE SECTION BELOW.

***Please note: If you need more than two tracks, please contact *undergraduate@moreheadstate.edu* so that the forms can be revised to fit your needs.**

Program Track Name:			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**

Total Track Hours	

Program Track Name:			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**

Total Track Hours	

Free Electives:			
Free General Electives are any course hours still necessary to meet the 120 hour degree requirement after all program requirements are met.			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**

Total Free Elective Hours	

TOTAL DEGREE HOURS (Total degree hours should equal 120 or contain a rationale as to why it cannot).	
Rationale as to why program exceeds 120 hours (if applicable):	
If there is a change to the current catalog language for program competencies, admission criteria, standardized testing requirements, etc., please list the NEW catalog language below. Do not list the old catalog language. Do not list the program courses again.	

Curriculum Map – (Place Program Name Here)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I
HUM II
SBS I
SBS II
NSC I
NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	FYS 101 First Year Seminar	G	3		HUM 1 – Elective	G	3
	ENG 100 CORE – Writing I	G	3		SBS 1 – Elective	G	3
	COMS 108 – Fundamentals of Speech Communication	G	3		CVM 110 or ART 109	R	3
	CVM 140 or CVM 201	R	3		CVM 140 or CVM 201	R	3
	ART 109 or CVM 110	R	3		CVM 250	R	3
	CVM 177	R	1				
	Total Credit Hours		16		**Total Credit Hours**		15

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	ENG 200 – Core – Writing	G	3		SBS 2 – Elective	G	3
	NSC 1 – Elective	G	3		NCS 2 – Elective	G	3
	HUM 2 – Elective	G	3		MATH - CORE	G	3
	ART 206	R	3		CVM Elective	R	3
	CVM Elective	R	3		CVM Elective	R	3
	CVM 277	R	1				
	Total Credit Hours		**16**		**Total Credit Hours**		**15**

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	CVM Elective	RU	3		CVM Elective	RU	3
	CVM Elective	RU	3		CVM Elective	RU	3
	CVM 377	RU	1		Electives		9
	Electives		9				
	Total Credit Hours		**16**		**Total Credit Hours**		**15**

FOURTH YEAR COURSE SCHEDULE							
✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	CVM 492	RU	3		COMS 499C	GRU	3
	CVM Elective	RU	3		Electives	U	9
	Electives	U	9				
	Total Credit Hours		**15**		**Total Credit Hours**		**12**

(E) Elective, (G) General Education Course (S) Supplemental
(P) Pre-requisite (R) Required Course (U) Upper Division Course 300-400 level (you must have 42 hours)

*Students must complete a minimum of 3 hours of Practicum at 3 different levels. Students may repeat each Practicum once for a maximum of 8 hours of Practicum. Any Practicum hours beyond 3 will count toward university elective hours.

**Successful completion of an internship is required to complete the program. Assessment of the internship is integrated into the General Education Capstone course. Students may elect to complete the internship for course credit or without credit. To earn course credit, students must complete a minimum of 51 clock hours logged for each hour of credit. Earned internship credit hours will count toward university elective hours.

Please insert any supporting documentation (email correspondence, IACUC form, etc.) here. If you do not have supporting documentation, please remove this page from the proposal.

Spoke with Laurie Couch.
Spoke with Gabria Sexton

Gabria W. Sexton
Mon 10/28/2019 1:49 PM

- Jeffrey Joseph Hill

Hello.

I spoke with Dr. Couch about the parts of the Major Revision form that do not require completion. She stated that all questions do need to be answered but for any question that is unaffected by the proposed change you are requesting it is acceptable to state such as the answer.

For example:
III. C. Your answer could be: The program outcomes and competencies are not changing with this revision.
III. D. Your answer could be: The goals and objects will continue to relate to the mission statement of the University as they do currently.

Thank you.

Gabria

Laurie L. Couch
Tue 10/22/2019 5:01 PM

- Jeffrey Joseph Hill

Hi Jeffrey –
It is a major change, but only in terms of the form that needs to be completed. Any time courses change, this form must be used.
Thanks,
Laurie

From: Jeffrey Joseph Hill <j.hill@moreheadstate.edu>
Sent: Monday, October 21, 2019 11:57 AM
To: Laurie L. Couch <l.couch@moreheadstate.edu>
Subject: FW: Curriculum Proposal

Good day-
My boss, Layne Neeper, recommended I reach out to you. The CVM program is wanting to add a class to a block of electives. Currently, in one block, there are 5 classes and students must choose two. We are wanting to add a class so that the block in question would have 6 classes and students must choose 2.
I contacted Gabria Sexton and she said this would be a major change. Dr. Neeper asked me to reach out to you and confirm that this, seemingly minor change, does in fact necessitate a Major change form.
Please keep me posted.
Thank you in advance-
Jeffrey

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	EEC 241 - Circuit Analysis
Department: (as listed in current catalog)	Computer Science & Electronics (CSE)
College: (as listed in current catalog)	College of Business & Technology - School of Engineering & Computer Science (SECS)

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Ahmad Bayan — (✓) Approved ( ) Disapproved — 10-22-19

Department Chair or Associate Dean (Sign and Print) — Date

Terence Chairs — (✓) Approved ( ) Disapproved — 10/28/19

College Curriculum Committee (Sign and Print) — Date

Corey Russell — (✓) Approved ( ) Disapproved — 10/29/19

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch — (✓) Approved ( ) Disapproved — 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

[signature] — (✓) Approved ( ) Disapproved — 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	EEC 241 - Circuit Analysis
Department: (as listed in current catalog)	Computer Science & Electronics
College: (as listed in current catalog)	Elmer R. Smith College of Business & Technology

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑ N/A	If an Information Technology signature is required, it has been obtained.	☑ N/A
☑ N/A	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑ N/A
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The course title, department, and college names correspond to the current catalog.	☑
☑	Course teaching workload, formula, and semesters taught are specified.	☑
☑	The course description EXACTLY matches the course description stated in the syllabus.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☑	Responses are complete and applicable for each question.	☑
☑ N/A	If the course requires the use of live animals, the IACUC form is attached.	☑ N/A
☑	The syllabus starts on a separate page.	☑
☑	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☑
☑	The syllabus contains the course title and course number (exactly as listed in the proposal).	☑
☑	The syllabus contains the academic term with date.	☑
☑	The syllabus contains the instructor's name.	☑
☑	The syllabus contains the office location.	☑

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☐	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

William R. Grise — 10/22/19

Originator (Sign and Print) — Approval Date

Sheila — 10/22/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ New Course ☒ Revised Course

Course Name (as listed in the current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	EEC	241	Circuit Analysis	2-2-3	3.47	Fall-Spring
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	EEC	241	Circuit Analysis	2-2-3	3.47	Fall-Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
BS-Engineering Technology (BSET), Computer Science & Electronics option
BS - Systems Integration Engineering
BS - Physics Area (Engineering Physics Electrical Track)

This is a ☒ required course. This is an ☒ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

EEC 241. Circuit Analysis. (2-2-3) Fall-Spring. Prerequisites: EEC 141 or PHYS 232. This course is a rigorous exposition of circuit analysis techniques that will enable the student to analyze any linear circuit, whether driven by DC or AC sources, or more complex waveforms, e.g., pulse or exponential signals. An important objective of the course is to introduce the student to the relationship between the time-domain and frequency-domain representation of signals, through the use of Fourier series and transforms (for periodic signals) and Laplace transforms (for transient or pulsed signals). The ability to move readily between these two representations of circuit (and system) behavior will benefit students in the Systems Integration Engineering program as they move into further study of control, automation, and communications systems. The course also aims to begin the student's journey into circuit design, by introducing the student to more advanced circuit subblocks, such as filters, amplifiers, A-to-D and D-to-A converters, sensor circuits, and magnetically coupled circuits, etc.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The course description and prerequisites need to be aligned with the course title and requirements. Currently, the course description focuses on concepts and techniques useful in the analysis of circuits under simple periodic waveform excitation, i.e., steady-state analysis of AC circuits. This includes the application of common network theorems like Thevenin's, Norton's, and the superposition theorems to a variety of circuits, as well as analysis and laboratory testing of simple RC, RL, and RLC circuits,and their role in realizing simple filters.

This revision of EEC 241 is intended to take advantage of the more thorough preparation in mathematics and physics that will be required for students in the Systems Integration Engineering program. Therefore, a broad goal of this revision is to prepare students to go beyond simpler DC and steady-state analyses of circuits, so that they can handle any types of signals, including pulse and exponential waveforms, and to analyze transient effects in circuits due to this wider variety of signals. Furthermore, the revised

course aims to introduce students to more complex types of circuits, which are used perfom more complex functions. The ability to analyze and design more complex circuits and circuit blocks will enable the students in the Systems Integration program to make use of these more complex circuits to understand and design systems with greater functionality, which they will encounter as they go forward into courses that deal with control systems, automation, or communication systems.

B. Justify the proposed instructional level (100-600) or instructional level change.

The current instructional level is appropriate for this revised course, as it will serve as a prerequisite for more advanced courses in the Systems Integration curriculum,at the 300 and 400 level.

C. List the student learning outcomes for the course.

(1) Deeper comprehension of essential circuit theorems: Thevenin's/Norton's theorems, and superposition, to apply to wider range of circuits than met in EEC 141.

(2) Application of several analytical techniques: node-voltage, mesh-current, and superposition of sources to solve any linear, planar circuit. Includes source conversion techniques, handling independent and dependent sources, and practice with measurement techniques used to troubleshoot and verify results of analysis.

(3) Application of the operational amplifier to simple amplifying and filter circuits; student will be able to analyze these circuits by means of negative feedback. Build and test these amplifiers in the lab.

(4) Treatment of circuit responses in both the time domain and frequency domains: use of Laplace transforms and Fourier series and transforms. Use these tools to examine transient and steady-state responses in circuits

(5) Treatment of RC and RL circuits as instances of first-order signal-processing blocks. Students will learn how these circuits respond to both periodic and non-periodic waveforms (pulses, exponential, ramp, etc.). Design, build, and test standard examples of these circuits in the lab.

(6) Treatment of RLC circuits as instances of second-order signal-processing blocks. Students will learn how the wide variety of responses that these circuits display to periodic and non-periodic waveforms can be used to synthesize useful behaviors in signal-processing and control systems, including the notions of underdamping, overdamping, and critical damping of output waveforms, as well as resonance and frequency selectivity. Major focus on filter circuit design and laboratory experiments on same.

(7) Analysis, design, and testing of a variety of mostly passive filter circuits. Students will learn how to assess how various components contribute to bith desired and undesired responses over a range of frequencies.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

(1) Deeper comprehension of essential circuit theorems - Thevenin's, Norton's, superposition: Evaluated through written assignments and objective exams (Exam I), plus at least one laboratory session. Assignments scored on basis of 10 points per problem, up to 100 points per assignment. Lab reports scored with a rubric. Exams scored up to 125 points for mix of short-answer questions and multiple part problems.

(2) Application of several analytical techniques (node-voltage, mesh-current, and superposition) to complex circuits: Evaluated through written assignments, objective exams (Exam I), SPICE or Multisim simulations, plus at least two laboratory sessions. Assignments scored as above in item #1, lab reports as in #1, Exams graded as in #1. SPICE simulations scored similarly to lab reports.

(3) Application of the operational amplifier to simple amplifying and filter circuits: Evaluated through written assignments, plus at least one laboratory session. Assignments graded as in #1, and lab reports scored as in #1.

(4) Treatment of circuit response in both the time and frequency domains: Evaluated through written assignments, objective exams (Exam II), mathematics reviews (for Laplace transforms and Fourier series), SPICE and/or Multisim simulations, and at least two laboratory sessions. Assignments graded as in #1, exams graded as in #1, lab reports assessed as in #1, SPICE simulations assessed as lab reports. Mathematics reviews not graded.

(5) Treatment of RC and RL circuits as first-order signal-processing blocks. This treatment will extend to both periodic and non-periodic signal sources: Evaluated by written assignments, objective exams (Exam II), SPICE and/or Multisim simulations, and at least one laboratory session. Assignments graded as in #1, exams graded as in #1, lab reports assessed as in #1, and SPICE simulations assessed as lab reports.

(6) Treatment of RLC circuits as instances of second-order signal-processing blocks: applied to bandpass and band-reject filters. Evaluated through written assignments, objective exams (Exam III), SPICE and/or Multisim simulations, and at least two laboratory sessions. Assignments, exams, lab reports, and SPICE simulations all assessed as in #1.

(7) Analysis, design, and testing of variety of passive filter circuits. Students will learn how to determine and synthesize frequency responses of general, complex circuits. Evaluated through written assignments, objective exams (Exam III and Final Exam), and at least two laboratory sessions. Assignments, lab reports, and exams assessed as in item #1.

E. Define how the course helps students to achieve learning objectives required for the program.

The manner in which each of the learning objectives of the course support the BSSIE program objectives is listed below:

(1) Deeper comprehension of essential circuit theorems: Thevenin's/Norton's theorems, and superposition, to apply to wider range of circuits than met in EEC 141

BSSIE Program Objectives: #1, 6, and 7.

(2) Application of several analytical techniques: node-voltage, mesh-current, and superposition of sources to solve any linear,

planar circuit. Includes source conversion techniques, handling independent and dependent sources, and practice with measurement techniques used to troubleshoot and verify results of analysis.
BSSIE Program Objectives: #1, 5, 6, and 7.
(3) Application of the operational amplifier to simple amplifying and filter circuits; student will be able to analyze these circuits by means of negative feedback. Build and test these amplifiers in the lab.
BSSIE Program Objectives: #1, 6, and 7.
(4) Treatment of circuit responses in both the time domain and frequency domains: use of Laplace transforms and Fourier series and transforms. Use these tools to examine transient and steady-state responses in circuits.
BSSIE Program Objectives: #1, 5, 6, and 7.
(5) Treatment of RC and RL circuits as instances of first-order signal-processing blocks. Students will learn how these circuits respond to both periodic and non-periodic waveforms (pulses, exponential, ramp, etc.). Design, build, and test standard examples of these circuits in the lab.
BSSIE Program Objectives: #1, 5, 6, and 7.
(6) Treatment of RLC circuits as instances of second-order signal-processing blocks. Students will learn how the wide variety of responses that these circuits display to periodic and non-periodic waveforms can be used to synthesize useful behaviors in signal-processing and control systems, including the notions of underdamping, overdamping, and critical damping of output waveforms, as well as resonance and frequency selectivity. Major focus on filter circuit design and laboratory experiments on same.
BSSIE Program Objectives: #1, 5, 6, and 7.
(7) Analysis, design, and testing of a variety of mostly passive filter circuits. Students will learn how to assess how various components contribute to both desired and undesired responses over a range of frequencies.
BSSIE Program Objectives: #1, 2, 5, 6, and 7.

BSSIE Program Objectives are listed below for reference:

1. Identify, formulate, and solve complex systems engineering problems by applying principles of multiple engineering disciplines, science, and mathematics
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. Communicate effectively with a range of audiences
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of systems engineering solutions in global, economic, environmental, and societal contexts
5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. Acquire and apply new knowledge as needed, using appropriate learning strategies.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The revised course, EEC 241, will support the mission of the University by (1) educating students more rigorously for success in our global environment, especially as the disciplines involved in the Systems Integration Engineering program are part of the global language of technology, and (2) educating the students in the program so that they can engage in useful scholarship in those same disciplines.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

Physics 211 - By description, PHYS 211 treats general circuit analysis up to the use of phasor analysis, and steady-state behavior of circuits in response to AC excitation. The proposed revision of EEC 241 goes beyond this by treating both transient and steady-state behavior, with additional topics in time and frequency domain analysis.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**

f. shares staff and/or resources

Following upon Item III-B above, the Department of Earth Science, Physics, and Space Systems Engineering offers the course PHYSICS 211. It is unknown at this time what the impact of the revised course would be on Physics 211.

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Kent Price, Ph.D., Physics

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Dr. William R. Grise, Ph.D., Professor
Dr. Cheng Cheng, Ph.D., Assistant Professor
Dr. Qingzhou Xu, Ph.D., Assistant Professor
Dr. Kent Price, Ph.D., Professor (Physics Dept.)

B. Identify external adjunct faculty, if appropriate.

N/A

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

25 - desired section enrollment; 15-20 - anticipated enrollment

B. Desired implementation date for the course.

Spring, 2021

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

EEC 241 is a lecture+lab course, taught face-to-face

D. Additional facilities and special equipment needs for this course, if any.

None

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☒ **Yes** ☐ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

MOREHEAD STATE UNIVERSITY
College of Business and Technology

School of Engineering & Computer Science

Department of Computer Science & Electronics
An ATMAE Accredited Program

SYLLABUS: EEC 241
Circuit Analysis

Spring, 2021

INSTRUCTOR: William R. Grisé, Rm. LC-105B. Tel: 3-2424.
Email: w.grise@moreheadstate.edu

TIME: **Lecture:** M: 10:00 – 11:50 AM. **Room:** LC-308
Lab: W: 10:00 – 11:50 AM. **Room:** LC-314

TEXT: *Circuit Analysis and Design*, by F. T. Ulaby, M.M. Maharbiz, and Cynthia M. Furse.
Publisher: Michigan Publishing, 2018.
ISBN: 978- 1-60785-483-8

PREREQUISITES: EEC 141 or PHYS 232 .

COURSE DESCRIPTION: EEC 241. Circuit Analysis. (2-2-3) Fall-Spring. Prerequisites: EEC 141 or PHYS 232. This course is a rigorous exposition of circuit analysis techniques that will enable the student to analyze any linear circuit, whether driven by DC or AC sources, or more complex waveforms, e.g., pulse or exponential signals. An important objective of the course is to introduce the student to the relationship between the time-domain and frequency-domain representation of signals, through the use of Fourier series and transforms (for periodic signals) and Laplace transforms (for transient or pulsed signals). The ability to move readily between these two representations of circuit (and system) behavior will benefit students in the Systems Integration Engineering program as they move into further study of control, automation, and communications systems. The course also aims to begin the student's journey into circuit design, by introducing the student to more advanced circuit subblocks, such as filters, amplifiers, A-to-D and D-to-A converters, sensor circuits, and magnetically coupled circuits, etc.

LEARNING OBJECTIVES: After satisfactory completion of this course, the student will:

(1) Deeper comprehension of essential circuit theorems: Thevenin's/Norton's theorems, and superposition, to apply to wider range of circuits than met in EEC 141.
Means of assessment: written assignments and objective exams (Exam I), plus at least one laboratory session.

(2) Application of several analytical techniques: node-voltage, mesh-current, and superposition of sources to solve any linear, planar circuit. Includes source conversion techniques, handling independent and dependent sources, and practice with measurement techniques used to troubleshoot and verify results of analysis.
Means of assessment: written assignments, objective exams (Exam I), SPICE or Multisim simulations, plus at least two laboratory sessions.

(3) Application of the operational amplifier to simple amplifying and filter circuits; student will be able to

analyze these circuits by means of negative feedback. Build and test these amplifiers in the lab.
Means of assessment: Application of operational amplifier to design of simple amplifying and filter circuits: Evaluated through written assignments, plus at least one laboratory session.
(4) Treatment of circuit responses in both the time domain and frequency domains: use of Laplace transforms and Fourier series and transforms. Use these tools to examine transient and steady-state responses in circuits
Means of assessment: Treatment of circuit response in time and frequency domains: Evaluated through written assignments, objective exams (Exam II), mathematics reviews (for Laplace transforms and Fourier series), SPICE and/or Multisim simulations, and at least two laboratory sessions.
(5)) Treatment of RC and RL circuits as instances of first-order signal-processing blocks. Students will learn how these circuits respond to both periodic and non-periodic waveforms (pulses, exponential, ramp, etc.). Design, build, and test standard examples of these circuits in the lab.
Means of assessment: RC and RL circuits and both periodic and non-periodic signal sources: Evaluated by written assignments, objective exams (Exam II), SPICE and/or Multisim simulations, and at least one laboratory session.
(6 Treatment of RLC circuits as instances of second-order signal-processing blocks. Students will learn how the wide variety of responses that these circuits display to periodic and non-periodic waveforms can be used to synthesize useful behaviors in signal-processing and control systems, including the notions of underdamping, overdamping, and critical damping of output waveforms, as well as resonance and frequency selectivity. Major focus on filter circuit design and laboratory experiments on same.
Means of assessment: RLC circuits, especially applied to bandpass and band-reject filters: Evaluated through written assignments, objective exams (Exam III), SPICE and/or Multisim simulations, and at least two laboratory sessions.
(7) Analysis, design, and testing of a variety of mostly passive filter circuits. Students will learn how to assess how various components contribute to bith desired and undesired responses over a range of frequencies.
Means of assessment: Filter design and analysis plus frequency response of general, complex circuits: Evaluated through written assignments, objective exams (Exam III and Final Exam), and at least two laboratory sessions.

DETAILED SYLLABUS:

WEEK	TOPIC
#1:	**Chapter 3:** Review and strengthen network theorems: Thevenin's, Norton's, and superposition. Start node-voltage and mesh-current analysis discussion, plus **application** circuits.
#2:	**Chapter 3:** Complete discussion of more advanced analysis techniques: node-voltage and mesh-current analysis. Analysis with independent and

	dependent sources. **Application** to models of active (transistor) devices.
#3:	**Chapter 4:** Analysis of simple op-amp circuits: amplifiers, frequency-selective filters, measurement circuits, ADC and DAC converters. Introduce negative feedback in circuits. **EXAM I**
#4:	**Chapter 5:** RC and RL first-order circuits. Review properties of inductors and capacitors. Introduce standard differential equation solutions to model response of RC and RL circuits to general types of signal excitation, both periodic and non-periodic.
#5:	**Chapter 5:** Continue analysis of response of RC and RL circuits. Focus on non-periodic waveforms, e.g., pulses, exponential, etc. **Applications** to RC op-amp circuits, sensor devices.
#6:	**Chapter 6:** RLC second-order circuits. Introduce standard differential equation solutions to model response of second-order circuits (RLC). Review use of RLC circuits subject to steady-state waveforms, including basic filters as **applications**. Introduce concepts of critical damping, underdamping, and overdamping of input waveforms by RLC circuits.
#7:	**Chapter 6:** Continue analysis of variety of responses of RLC circuits. **Application** of damping concepts to control systems.
#8:	**Chapter 7:** Phasor analysis of RC and RLC circuits. Use of complex algebra to analyze series-parallel reactive circuits. **Application** to oscillator circuits, impedance transformations, and/or power-supply circuits.
#9:	**Chapter 8:** Brief discussion of AC power: apparent and real power, power factor correction. **EXAM II**
#10:	**SPRING BREAK**
#11:	**Chapter 9:** Frequency response of circuits, filters, and systems. Use of Bode plots to describe filters, design of passive and active filters, notion of filter order and techniques to cascade filter sections. **Application:** Filters in communication circuits.
WEEK	**TOPIC**
#12:	**Chapters 10-11:** Three-phase circuits in power systems, power generation, power-factor correction. **Application** of transformers in power and control systems.
#13:	**Chapter 12:** Use of Laplace transforms to analyze circuit and system behavior. Response of circuits to impulses and complex or transient waveforms. S-domain analysis and partial fraction expansion of Laplace transforms to model non-trivial waveforms.
#14:	**Chapter 12:** Continue Laplace transform analysis of **application** circuits in control systems and communications.
#15:	**Chapter 13:** Fourier series techniques to represent periodic waveforms. **Application** to signals and modulation in communication systems. **EXAM III.**
#16:	**Chapter 13:** Complete Fourier analysis by use of Fourier transforms in circuit analysis. Relation between Fourier analysis and Laplace transform analysis, **applied** to control systems and communications systems.
#17:	**FINAL EXAMS**

COURSE REQUIREMENTS:

- It is the responsibility of the student to keep him/herself fully informed as to any changes in assignments, test dates, lab write-ups, and quizzes.
- Attendance at all lectures is expected. It cannot be overstressed how important it is for students to come to class, listen, take notes, and ***ask questions.*** Previous experience in my classes has shown that, in general, students who actively participate in class, even though they might have difficulties with the material, perform better overall than those who attend sporadically.
- Attendance at lectures will be taken each day. Those students who have more than three (3) unexcused absences will lose one percentage point from their final grade for each unexcused absence.
- Attendance at ***all*** laboratory sessions is required. Unexcused absences from laboratories will ***not*** be made up. All lab reports must be generated by individuals, and will be graded individually. Lab reports will be due at the beginning of the next lab session. Late lab reports will go down a letter grade.
- Homework will be assigned regularly, picked up regularly, and graded periodically.
- Class participation will form part of my evaluation of your performance in this class. As part of my assessment of your class participation, I will be questioning students on their understanding of the reading material. Every student will get a chance to take part! There will also be some group/team activities that students will engage in, and finally, there will be periodic quizzes to establish that students are reading the material.

GRADING SYSTEM:

Exams (3)	300 points
Final Exam	150 points
Laboratory	125 points
Assignments	125 points
Participation/Quizzes	100 points
TOTAL	800 POINTS

GRADING SCALE: as percentage of *best* grade

A	85% and above
B	75 – 84%
C	65 – 74%
D	50 – 64%
E	< 50%

COURSE CONTINGENCY PLAN:

In the event that Morehead State University is closed for an extended period or in the event that the instructor is unable to meet during scheduled hours for an extended period, the following course contingency plan will be implemented.

Through BlackBoard, students will have access to all assignments and course materials only if an instructor judges this method improves student's understanding and participation. Students will continue working on assignments, continue readings and engage in discussions on Blackboard as scheduled. Assignments will be due as scheduled. An alternate instructor will facilitate the Blackboard activities in the event that the instructor is unable to facilitate due to illness.

Students who are unable to complete the work because of illness must arrange a schedule with the instructor for completion of assignments. If a student is ill, they will communicate that to the instructor and if work cannot be made up by the time grades are due, the student and instructor will make arrangements for an "I".

ACADEMIC HONESTY

While teamwork and team-learning are recommended during lab, no form of plagiarism will be tolerated. Cheating, fabrication, plagiarism or helping others to commit these acts will not be tolerated. No-make up exam will be offered and Instructor discretion will be counted in total. Academic dishonesty will result in disciplinary action including, but not limited to, failure of the student assessment item or course, and/or dismissal from MSU. If you are not sure what constitutes academic dishonesty, read The Eagle: Student Handbook or ask your instructor. The policy is located at www.moreheadst.edu/units/studentlife/handbook/academicdishonesty.html. For example: copying information from the Internet is plagiarism if appropriate credit is not given.

OTHER INFORMATION:

Campus Safety Statement: Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

Americans with Disabilities Act (ADA): Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 ADUC coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

MINOR or CERTIFICATE
Revision of a Minor or Certificate
Undergraduate Curriculum Routing Form

January 2019

Minor or Certificate: (as listed in current catalog)	Gender Studies Minor
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee (Sign and Print) — Date

Department Chair or Associate Dean (Sign and Print) — (✓) Approved ( ) Disapproved — 11-12-19 — Date

College Curriculum Committee (Sign and Print) — (✓) Approved ( ) Disapproved — 11-12-19 — Date

Dean (Sign and Print) — (✓) Approved ( ) Disapproved — 11-21-19 — Date

Teacher Ed. Council (if a secondary education program) (Sign and Print) — ( ) Approved ( ) Disapproved — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Undergraduate Curriculum Committee (Sign and Print) — (✓) Approved ( ) Disapproved — 12/16/19 — Date

Vice President for Academic Affairs (Sign and Print) — ( ) Approved ( ) Disapproved — 12-16-19 — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Minor or Certificate: (as listed in current catalog)	Gender Studies Minor
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Humanities and Soc Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

Helpful Information:

1. Important Definitions Used in the Curriculum Process
   - Minor = a set of discipline-specific courses of at least 21 hours
   - Certificate = a series of courses related to a specific topic or skill with a prescribed number of hours. For additional information contact the Office of Academic Programs at 783-2003 or email undergraduate@moreheadstate.edu.
     - More than 50% of certificate credit hours must be 300 level or above and students must have a major on file.
     - Certificate program must be completed in less than one academic year and must be completed in less than 30 credit hours.
     - Completion of a certificate does not replace a minor for program completion.
   - Equated courses vs. cross-listed courses = equated courses are courses of identical content that have different prefixes (and are approved through the undergraduate curriculum process), whereas cross-listed courses have the same instructor and are offered at the same time/location.
   - Pre-requisite = course(s) that a student must successfully complete prior to registering for a more advanced course.
   - Co-requisite = course(s) that a student must take concurrently with another course.

2. Any proposal with a secondary education component must be routed through the Teacher Education Council.

3. The initiator is responsible for tracking a proposal through the approval process.

4. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	Each course has been reviewed for pre-requisites, co-requisites or testing requirements. There are no hidden pre-requisites, co-requisites, or testing requirements.	☑
☑	If the proposal is a certificate, more than 50% of the credit hours are 300 level or above.	☑
☑	If the proposal is a certificate, the proposal includes language that students must have a major on file.	☑
☑	If the proposal is a certificate, there is language that the program must be completed in less than one academic year.	☑
☑	If the proposal is a certificate, it contains less than 30 credit hours.	☑
☑	If the proposal is a certificate, there is language in the proposal to indicate that it does not replace a minor for program completion.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Constana Hardesty 11/12/19

Originator (Sign and Print) Approval Date

Scott Dawson 11-12-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

MINOR OR CERTIFICATE
Revision of a Minor or Certificate Form

The outline below is to be used for the revision of a minor or certificate. Any new course included in this minor or certificate requires a separate "New Course or Major Revision to Existing Course" proposal. A new minor or certificate should use the "Creation of a Minor or Certificate" form.

☒ **Revision of a Minor**

☐ **Revision of a Certificate**

- More than 50% of certificate credit hours must be 300 level or above and students must have a major on file.
- Certificate program must be completed in less than one academic year and must be completed in less than 30 credit hours.
- Completion of a certificate does not replace a minor for program completion.

I. MINOR OR CERTIFICATE REVISION INFORMATION

State the current title of the Minor or Certificate (as listed in the current catalog)

Gender Studies Minor

State the proposed revised title of the Minor or Certificate (if applicable)

No change

CIP Code	***Contact your department chair or associate dean to verify the correct CIP code information.***
05-02	

II. NEED AND JUSTIFICATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

1. The description of the minor and the program competencies have not been revised in several years. We are changing the description and competencies to reflect the goals of the current program.

2. We are eliminating GST 490 Integrative Capstone from the required core and making it an elective. We will encourage our students to take the capstone as an elective. Currently the GST capstone is taught as a cross-listed course with the Sociology capstone because we do not have enough minors to fill a full capstone section. Many minor programs on campus do not require a capstone, and we believe that this change does not compromise the quality of the program.

3. We are eliminating four courses from the list of approved electives in GST either because they are no longer taught or they are no longer relevant to the program competencies. These courses include: POLS 110 Introduction to Political Theory; POLS 317 Feminist Political Thought; GST/SWK 230 Social Welfare History and Ethics; and GST/SWK 340 Community Mental Health.

4. We are adding four courses to the list of approved electives in GST. These are courses that are currently equated with GST but are not included on the list of approved electives for the GST minor. We want these GST courses to be included in the list of approved minor electives. These courses include:

GST/NEUR/PSY 223 Brain Development and Sex Differences
GST/SOC/SWK/CRIM 343 Religion and Sexuality
GST394/ENG 398 Gay and Lesbian Literature
GST 476 Special Problems in Gender Studies

5. We are adding two new courses to the list of approved electives. These two courses are currently approved Sociology courses, but they do not currently have GST prefixes. Additional proposals that are being prepared request that these courses be equated with GST. These courses include:

GST/SOC/SWK/CRIM 337 Sociology of Food
GST/SOC/SWK/CRIM 355 Sociology of the Body

The new description and competencies and requirements should be as follows:

Gender Studies Minor

A Gender Studies minor educates students about the nature of gender dynamics and gender inequality, and situates individual experiences of gender socialization in educational, historical, aesthetic, sociological and political contexts. The Gender Studies minor also equips students with the knowledge and analytical abilities needed to engage critically with gender-related issues, and recognize and transform gender inequality in their own lives and in the world at large.

Program Competencies

The purpose of the program is:

1. to challenge students to use a variety of critical thinking and problem-solving skills to recognize and contend with gender dynamics and inequality at the individual and social levels.

2. to develop students' understanding about the ways in which different cultures socialize members into gendered roles.

3. to expand students' knowledge, skills, and consciousness regarding their choices about institutionalized societal structures such as family, healthcare, education, political systems, work, and leisure.

4. to inform students of the diversity and impact of contributions from individuals of various identities throughout history and across academic disciplines in a multicultural and global society.

The list of required courses (please see section V below). Please note that in this list of required courses the elective GST/SOC 300 Stratification used to be GST 397/SOC 300. In an accompanying proposal we are requesting the the course number GST 397 be changed to GST 300 so in the proposed list of electives it is listed as GST 300.

B. Program *coherence* refers to 1) appropriate sequencing of courses, not a mere bundling of credits so that 2) student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Describe any impacts to coherence that the proposed revision may have.

All of these changes will improve the program and update the competencies. Program coherence will not be compromised.

C. Have admission requirements and/or limitations on enrollment changed? ☐ **Yes** ☒ **No**
If so, how?

D. If a similar program exists at MSU or in Kentucky, list the program and provide justification for the duplication.

This is not a new program. There is not a similar program at MSU. There are similar programs at other institutions in KY and across the country because Gender Studies is an intergral part of a liberal arts education.

III. GOALS AND OBJECTIVES

A. Has the purpose of the program changed? ☐ **Yes** ☒ **No**
If so, how?

B. What are the goals and objectives of this proposal? How do the proposed changes impact the program's alignment with the program's mission and goals, and/or the University's mission and goals?

The changes are simply to update the program. Several of the equated courses are no longer taught, and several new courses are being developed. The relevance of the program to the University's mission is not being changed. The goal is to:

1. update the description

2. update the competencies

3. eliminate irrelevant courses as electives

4. add relevant courses as electives

C. State the revised program outcomes or competencies to be achieved by students.

Program Competencies

The purpose of the program is:

1. to challenge students to use a variety of critical thinking and problem-solving skills to recognize and contend with gender dynamics and inequality at the individual and social levels.

2. to develop students' understanding about the ways in which different cultures socialize members into gendered roles.

3. to expand students' knowledge, skills, and consciousness regarding their choices about institutionalized societal structures such as family, healthcare, education, political systems, work, and leisure.

4. to inform students of the diversity and impact of contributions from individuals of various identities throughout history and across academic disciplines in a multicultural and global society.

D. How do the specific goals and objectives relate to the mission statement of the University?

As a community of lifelong learners, we will:

- educate students for success in a global environment;
- engage in and with scholarship;
- promote diversity of people and ideas;
- foster innovation, collaboration and creative thinking; and
- serve our communities to improve the quality of life.

This minor promotes an understanding of gender diversity, gender expression, sexuality and sexual orientation, sexism and gender inequality, and sexual harassment/sexual assault and violence in the workplace and throughout society. It requires students to engage with the scholarship and creative work of diverse people around the globe. This education also requires students to engage in scholarship themselves and prepares them for success in a global environment, promotes diversity of people and ideas, fosters creative thinking, and serves our communities. This minor is very relevant to the students' lives in their communities and to their success in the workplace.

E. List the methods of program assessment to be used, other than course grades, to ensure that the desired outcomes or competencies are attained by students. Indicate the frequency of assessment and how results will be made available to program faculty.

GST 273, Intro to Gender Studies will be used to assess the program competencies.

Competency 1. Essay exam and objective exam questions will be usedthroughout the semester to assess students use of critical thinking and problem-solving skills to recognize and contend with gender dynamics and inequality at the individual and social levels. This competency will also be assessed with students' performance on a final paper that explores gender inequality and social change.

Competency 2. In-class writings and reflections as well as essay and objective exam questions will be used to assess students' understanding about the ways in which different cultures socialize members into gendered roles.

Competency 3. In-class writings and reflections will be used to assess students' consciousness regareding their choices about institutionalized social structures such as family, healthcare, education, poltiical systems, work and leisure and essay and objective exam questions will be used to assess students' knowledge of these institutionalized societal structures.

Competency 4. The majority of the readings for the course will come from individuals of various identities. Essay and objective exam qeustions will be used to assess students' understanding of the diversity and impact of contributions from individuals of various identities throughout history and across academic disciplines in a multicultural and global society.

IMPACT

A. How will the program changes affect transfer students?

These changes will have no effect on transfer students.

B. List all departments and programs that could be impacted by this proposal. For example, any department that:

a. offers required courses for this minor or certificate
b. offers elective courses for this minor or certificate
c. offers similar courses contained in this minor or certificate
d. has an equated course
e. has courses in this proposal listed as a co-requisite or pre-requisite
f. shares staff and/or resources

Social Work and Political Science both have courses being removed from the list of required electives. There are no changes that will significantly affect any other programs. Psychology, English, and Sociology have one or more courses being added to the Gender Studies list of approved electives.

C. Explain the potential impact on the other departments and programs.

The change in the approved list of electives will not have any signficiant impact on any of these programs. Typically, these courses enroll only a few GST students, so the numbers are not significant enough to have an impact.

D. List each of the individuals in the other departments and programs notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.).

We have notified several individuals in terms of updating the list of approved electives to ensure that the electives are currently being taught and are being taught in a way that is consistent with the goals of the program. The individuals who have been contacted include Dr. Ric Caric - POLS; Dr. Alana Scott HST; Dr. Ann Andaloro COMS; Ms. Becky Davison SWK.

E. Will this change impact personnel resources? ☐ **Yes** ☒ **No** **If so, how?**

IV. ADDITIONAL INFORMATION

A. Please list enrollment and number of students completing the minor/certificate for the past four years.

UNKNOWN

A. Anticipated enrollment and number of graduates from this program for the next four years.

50

B. Explain and include a cost for any additional or remodeled facilities that will be required as a result of the change.

NONE

C. List and provide a cost for any additional equipment required.

NONE

D. State the desired implementation date for the minor or certificate.

FALL 2020

V. PROPOSED PROGRAM REQUIREMENTS

Please use the template below to list all Program courses. To create additional lines, tab while cursor is in the last "Course Hours" field.

Example of different types of entries. Not all programs, minors or certificates will have each type of entry.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MSU	300	Upper level course	3
MSU	400	Variable hour course	1-3
		Free Electives	9

List each specific course required in the minor or certificate. To create additional lines, place the cursor in the last "Course Hours" field and tab.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
GST	273	Introduction to Gender Studies (core requirement)	3

		18 hours of approved electives – see list below	18 from list below
GST	223	Brain Development and Sex Differences	3
GST	300	Stratification	3
GST	302	Criminogenic Family	3
GST	303	Family Violence	3
GST	305	Cultural Anthropology	3
GST	313	Women in American History	3
GST	320	Women Writers and Feminist Perspectives	3
GST	322	Gender and Education	3
GST	333	Women and Partner Violence	3
GST	335	Families in Modern Society	3
GST	337	Sociology of Food	3
GST	343	Religion and Sexuality	3
GST	350	Sex and Gender	3
GST	351	Philosophy of Love and Sex	3
GST	354	Individual and Society	3
GST	355	Sociology of the Body	3
GST	363	Sex Industry Perspectives	3
GST	374	Race and Ethnicity	3
GST	375	The Middle East	3
GST	377	Twentieth Century Asian Wars	3
GST	380	Race, Class, Gender, and Crime	3
GST	394	Gay and Lesbian Literature	3
GST	452	Issues in Contemporary Broadcasting	3
GST	474	Women and Health	3
GST	476	Special Problems in Gender Studies	3
GST	490	Integrative Capstone	3

Total Minor or Certificate Hours	21

From: Eric Jerde
To: Gabria W. Sexton
Subject: ESS & GEO courses
Date: Tuesday, December 3, 2019 10:58:01 AM

Gabria,

Here is a note describing what we're planning for the future GIS courses. The changes currently proposed to make the GEO courses 2-2-3 format (GEO 349, 351, 353, & 355) are in line with our current ESS courses (ESS 330, 331, 455, & 401). It is our plan in the next curricular cycle to propose equation of our courses with the GEO ones, which will align the course numbering. We will undertake this next Fall with the accompanying program revisions that will be required with the new numbers.

We in PHES are entirely in support of the efforts being made this year with regard to the GEO courses.

Cheers,

Eric Jerde
Chair
Department of Physics, Earth Science & Space Systems Engineering
123 Lappin Hall
Morehead State University
Morehead, KY 40351
Phone: 606.783.5406
Email: e.jerde@moreheadstate.edu
www.moreheadstate.edu/College-of-Science/Earth-and-Space-Sciences

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	GEO 349 Intro to GIS/Cartography
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities, & Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Chris Howes Chris Howes (X) Approved ( ) Disapproved 10-21-2019
Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.24.19
Department Chair or Associate Dean (Sign and Print) Date

Hana Scott Hana Scott (✓) Approved ( ) Disapproved 11-25-19
College Curriculum Committee (Sign and Print) Date

John Ernst (✓) Approved ( ) Disapproved 11-25-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corver (✓) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

Brad Cliff ( ) Approved ( ) Disapproved 12/6/19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GEO 349 Intro to GIS/Cartography
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudil College of Arts, Humanities, & Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☑	If an Information Technology signature is required, it has been obtained.	☐
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☑	The course title, department, and college names correspond to the current catalog.	☐
☑	Course teaching workload, formula, and semesters taught are specified.	☐
☑	The course description EXACTLY matches the course description stated in the syllabus.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☑	Responses are complete and applicable for each question.	☐
☑	If the course requires the use of live animals, the IACUC form is attached.	☐
☑	The syllabus starts on a separate page.	☐
☑	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☐
☑	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☑	The syllabus contains the academic term with date.	☐
☑	The syllabus contains the instructor's name.	☐
☑	The syllabus contains the office location.	☐

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Timothy Hare — Timothy Hare — 10-15-2019

Originator (Sign and Print) — Approval Date

Scott Davison — 10.22.19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ New Course ☒ Revised Course

Course Name (as listed in the current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	GEO	349	Intro to GIS/Cartography	3-0-3	3	Fall
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	GEO	349	GIS 1	2-2-3	3	Fall

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Geography Minor

This is a ☐ required course. This is an ☒ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

GEO 349 - GIS 1
(2-2-3) Introduction to GIS and geospatial technologies. This course provides practical training for creating, manipulating, analyzing, and displaying spatial data using geospatial information systems and cartographic principles. Students apply these multidisciplinary techniques to real-world problems in a variety of fields. Credits 3. Corequisite GEO349L. Equates with ESS330.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

This revision is a part of a general revision of all GEO prefix GIS courses to clearly tie them together as a coherent set. All four courses (GEO349, GEO351, GEO353, GEO355) require substantial lab time. The names of GEO349 and GEO351 are being revised to clearly show students their two sequence relationship as the foundational GIS courses. The course levels of GEO353 and GEO355 are being updated to accurately reflect their advanced nature building on basic skills developed in GEO349 and GEO351. Prerequsities are being updated to show students that they must complete GEO349 before any of the other three courses (GEO351, GEO353, GEO355). The name of GEO355 is being revised to more clearly state the subject of the course. The course numbers of GEO353 and GEO355 are being revised to better match their corresponding courses in ESS (401 and 455). GEO 353 is being revised to include lab time because the content requires substantial computer lab work by the students and to match the course number of ESS455 so they may be equated.

B. Justify the proposed instructional level (100-600) or instructional level change.

Spatial-data relationships can be complex and students will need to understand them to engage in project-based inquiry and presentation. The course is highly integrative and requires students to build on previously learned information and assemble it into new constructs. Thus this course is appropriate for the 300-level because students will have completed the other material at the 100- and 200-level.

C. List the student learning outcomes for the course.

1. Describe and use the concepts underlying good cartographic and GIS practice,
2. Identify the application of these concepts in practice, and
3. Select and apply the appropriate techniques to real-world subjects.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or** 2. Students will complete an exam; objective test.

1. Students will complete a series of laboratory assignments including quizzes, exercises, and map products; objective scoring.
2. Students will complete two exams; including objective questions and essay scored by rubrics.
3. Students will produce a series of map products; scored by a rubric.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

The course helps students to develop skills in the understanding and use of geospatial technologies that are fundamental to mapping and geographical analysis in a variety of fields and applications.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The course helps students to develop skills in the understanding and use of geospatial technologies that are fundamental to mapping and geographical analysis in a wide variety of fields including business geomatics, environmental science, surveying, political science, criminology, sociology, and many others. These skills are powerful tools to help graduates compete in the job market. These skills provide a foundation for student success in a global environment and foster innovation and creative thinking.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

ESS330 Geospatial Science I was created to provide GEO349 for ESS students.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

At this time, no single department can staff and provide all resources for GEO349 or the other GIS-related courses. The Space Science Program is funding the necessary software. IT provides the necessary hardware. staffing is provided collaboratively by Sociology, Social Work, & Criminology, Hist, Phil, Pol, I'nt & Legal Studies, Agricultural Sciences, and Engineering & Technology Mgt. Earth and Space Science intends to include appropriate skills in a future hire.

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Chris Howes, IT - email
Eric Jerde, Chair EASS - verbal & email
Joe Curd, instructor SECS - verbal & email
Ahmed Zargari, Associate Dean SECS - verbal & email
Joyce Stubbs, Chair AGSI - email
Dianna Murphy - AD SHSS - verbal & email
Jason Holcomb, Associate Professor of Precision Agriculture/GIS and Geography - verbal & email

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Timothy Hare - PhD - Professor fo Anthropology
Dr. Hare works as a regional analyst and divides his time between the spatial analysis of social, economic, and health factors across central Appalachia, and the study of regional socioeconomic transformations in ancient Mesoamerican societies. Both research agendas entail extensive and sophisticated use of a wide variety of geospatial technologies, especially geographical information systems. His PH.D. dissertation applies GIS to mapping, modeling, and spatial statistics of regional settlement in the Aztec Empire. Since then, he has directed numerous projects aimed at reconstructing the dynamic changes in political and economic institutions in

contemporary Appalachia and Pre-Columbian Aztec and Maya societies. He has co-directed archaeological investigations at the ancient city of Mayapán in Mexico since 2001. His anthropological work appears in Latin American Antiquity, Anthropos, The Journal of Archaeological Research, The Journal of Archaeological Science, and Remote Sensing.
His archaeological research agenda continues to expand the regional database of the ancient Maya. He integrates the final products of fieldwork using survey-grade global positioning systems (GPS), aircraft and drone-based laser scanning, and drone-based photogrammetry within GIS with traditional archaeological and environmental data to provide the foundation for data analysis and for answering anthropological research questions.
Joe Curd - MS - Geography - Instructor
Jason Holcomb - PhD - Geography-Associate Professor of Precision Agriculture/GIS and Geography

B. Identify external adjunct faculty, if appropriate.

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.
Approximately 20; determined by capacity of available computer labs.

B. Desired implementation date for the course.
Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
Lecture & laboratory

D. Additional facilities and special equipment needs for this course, if any.
The course is taught using software by ESRI, including ArcGIS Desktop, ArcGIS Pro, and ArcGIS Online.
IT is maintaining computer labs with the appropriate software in Ginger 213 and Lloyd Cassity 305.

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☒ **Yes** ☐ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?
Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards

(www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.

- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

GEO 349: GIS 1 - Corequisite GEO349L.

Morehead State University - Caudill College Arts, Humanities, & Social Sciences

School of Humanities & Social Sciences

Department of History, Philosophy, Politics, Global Studies, & Legal Studies

Fall 2020: MW 3:00-4:15/4:50pm; Ginger 213

Instructor: Timothy S. Hare

Office: 350B Rader Hall

Telephone: 606-783-9436

E-mail: t.hare@moreheadstate.edu

Office Hours: MWF 10:00-11:00 pm, TTh 2:00-3:00 am & by appointment

Sources of all Course Information:

1. This syllabus
2. Blackboard

Official Course Description

GEO 349 – GIS 1

(2-2-3) Introduction to GIS and geospatial technologies. This course provides practical training for creating, manipulating, analyzing, and displaying spatial data using geospatial information systems and cartographic principles. Students apply these multidisciplinary techniques to real-world problems in a variety of fields. Corequisite GEO349L. Equates with ESS330.

Course Overview:

Geographical Information Systems (GIS) provide powerful tools for the collection, management, and analysis of data with spatial components. Recent developments in the capabilities and usability of GIS coincide with the creation of massive geo-referenced databases that facilitate the incorporation of "space" into science, business, and government. For instance, government officials use GIS to manage properties, regulate land-use zones, and manage environmental and cultural resources. Businesses use GIS to locate the most advantageous locations for retail outlets, manage projects, and route transportation and delivery services. Academics apply GIS in almost every field of endeavor. Sociologists incorporate GIS into census analyses. Political scientists use GIS to investigate spatial

variability on voter activities and choices. Ecologists use GIS to investigate environmental systems over larger areas and at finer levels of detail than was possible previously.

Growth of GIS is generating a demand for skilled individuals as well as specialists in data manipulation, analysis, and display. Non-specialists in many fields need to understand the characteristics of spatial data and how to use them effectively. GIS specialists are needed to develop and maintain growing spatial databases. In either case, it is essential to develop an understanding of spatial data (their collection, organization, transformation, etc.), spatial data manipulation techniques (data classification, thematic mapping, interpolation, overlay analysis, buffering, etc.), and rigorous methods for using these data and tools for investigating important issues. In addition, the understanding of the fundamentals of cartography is increasingly essential as maps begin to play even more important roles in decision-making and research. The goal of this course is to provide a solid foundation in each of these areas.

Course Specifics

This course introduces cartography and GIS and emphasizes the hands-on application of GIS technology to real-world problems and issues. We will explore cartography from the perspective of manipulating and exploring spatially-referenced data and graphically communicating spatial information accurately and clearly. We will focus on the nature of spatial data, including their creation, transformation, and analysis.

Class sessions include a mix of lecture/discussion and hands-on applications. Lecture/discussion focuses on developing an understanding of cartographic and GIS concepts. Lab sessions focus on practical implementation of these concepts on the computer. Lab activities will use ArcGIS for spatial data creation, management, exploration, and mapping.

When the course concludes, you will have gained an appreciation for both the tools available for the creation, maintenance, and analysis of geographical data and the practical and theoretical concerns with producing high quality spatial output (map layouts). You will also learn the intellectual tools that geographers and other GIS users have for "making sense" of the physical and social contexts in which we live.

Course Goals:

The fundamental aim of the course is to provide the background and skills to select and apply appropriate cartographic and GIS skills to solving real-world problems and issues. More specifically, we will strive to:

1. Describe and use the concepts underlying good cartographic and GIS practice,
2. Identify the application of these concepts in practice, and
3. Select and apply the appropriate techniques to real-world subjects.

Program Competencies	Course Objectives/SLOs	Measures
Be able to interpret and use a variety of maps, as well as demonstrate proficiency in storage, management, and manipulation, and display of geographic data in order to answer research questions and solve problems	Understand and use the concepts underlying good cartographic and GIS practice	Quizzes, lab exercises; objective
Demonstrate appropriate content knowledge of core geographic concepts	Appreciate the practice of these concepts in a range of applications in different fields	Exams; objective
Be able to conduct original research, and communicate research results effectively in written and oral formats	Apply appropriate techniques to real-world subjects	Map products; rubric

Course Texts:

We will read the following two books; all are available at the campus bookstore.

Brewer, Cynthia A. 20015. *Designing Better Maps: A Guide for GIS Users*. Redlands, CA: ESRI Press. ISBN-13: 978-1589484405 ISBN-10: 1589484401. This is a comprehensive overview of digital cartography. You will gain an understanding of how to create maps that communicate complex ideas clearly.

Price, Maribeth. 2019 *Mastering ArcGIS*. Eighth Edition. McGraw-Hill Higher Education, Boston. ISBN10: 1259929655 ISBN13: 9781259929656. This is a comprehensive handbook to using ArcGIS. Each chapter provides detailed explanations, video demonstrations, and laboratory exercises that help explain the practical application of ArcGIS. It will be essential reading for completing lab exercises during the class. It will become an essential guidebook to keep next to your computer as you become a professional in GIS.

Academic Expectations:

This course uses a variety of learning and teaching styles including lectures/discussions, readings, self-tests, laboratory exercises, exams, and a final project. You should strive to be active and engaged. I expect you to attend class, participate actively in discussions and other class activities, read the texts carefully in accordance with the schedule, and complete the assignments in a timely fashion. Lab exercises will often require additional time outside of the scheduled class period. You must assume an active role in ensuring the success of the class and your mastery of the material by asking questions, telling me when my answers are unclear or fail to grasp the intent of your questions, and informing me of how well you are learning the material.

Evaluation Methods:

Course grades are based on quizzes, laboratory exercises, map products, exams, attendance, and participation.

Activity	Point Distribution
Quizzes	15%
Lab Exercises	30%
Map Products	20%
Exams	25%
Participation	10%
Attendance	*

Daily Activities/Quizzes: The textbooks are meant to be read prior to the sessions for which they are assigned. In order to encourage reading, there will be a variety of daily activities designed to demonstrate that you have completed the readings and thought about them.

Participation: You should keep up with the readings and come to class prepared to answer questions, ask questions, and engage in general discussion. Hands-on experience is the foundation for successfully learning GIS. Class sessions used for **laboratory activities and exercises** are aimed at building familiarity with GIS software and spatial data. Exercises will become more sophisticated as we investigate new techniques and problems.

The **three exams** cover all materials from lectures, discussions, and texts, prior to the exam dates. The second and third exams are not cumulative, but strong understanding of earlier material is essential. The exams are composed of multiple choice questions, short essays, and diagrams. Make-up exams are discouraged and instructor approval is required prior to missing exams.

Your semester work will culminate in the creation of a **map** and **short report**. Each student will plan and conduct a GIS-oriented project on a topic of their choosing. The primary purpose is to demonstrate sound cartographic design principles and mastery of basic ArcGIS functionality. Each project will culminate in a map accompanied by a written report. I will provide a detailed outline of each component of the project as the semester proceeds. Due dates are identified in the course outline. The project report will summarize the goals, methods, and results of the project.

Attendance * is mandatory. **Attendance** is essential to learning cartography and GIS. *Each student is allowed 2 unexcused absences*. Subsequently, *you will lose ½ of a letter grade per unexcused absence*.

Attendance will be taken regularly. If you arrive late to class, you are responsible for letting me know after class that you were present.

Missed exams or assignments resulting from unexcused absences will receive zeros. Excused absences will be granted when students contact me before class with approved explanations such as illness or family emergency. Please see the section on absence in the *MSU Undergraduate Catalog* for further guidance.

All assignments must be submitted via Blackboard. *All assignments are to be turned in by the beginning of class on the date they are due.*

Grading:

Grading is a process of both subtraction and addition. Points will be lost for errors and deficiencies and awarded for insightful statements, critical thinking, and imaginative thought. A correct essay and/or response does not guarantee a perfect grade. Some responses are correct while other responses are correct and show evidence of synthesis, insight, creative thinking, care, and writing skills.

Given the importance of writing in almost any endeavor today, I pay close attention to writing style as well as content. I encourage you to submit drafts of your essays early. I will read and comment on them without grading. I strongly encourage everyone to visit the Tutoring & Learning Center (Camden Carroll Library First Floor). I know no one who would not benefit from support in writing (including myself).

Following the MSU Undergraduate Catalog, I will employ the following grading system:

Letter	Quality	Score
A	Excellent	90-100%
B	Good	80-90%
C	Average	70-80%
D	Below Average	60-70%
E	Failure	<60%

Please note that assignments that satisfy instructions and provide the basic material will merit a C. To enter the B range, you must display superior work. This involves synthesis, critical reflection, individual insight, etc. To enter the A level, I will look for an "exceptionally high" degree of intellectual rigor. We will discuss these criteria in greater detail as the semester progresses.

Academic Honesty:

All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog (http://moreheadstate.smartcatalogiq.com/2018-2019/Undergraduate-Catalog/Administrative-Policies-and-Procedures/Academic-Honesty-Policy).

Americans with Disabilities Act (ADA):

Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.

Campus Safety Statement:

Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/

Course Schedule:

This schedule can, and likely will, change. A lecture, discussion, or lab exercise might take longer than I anticipate. Nothing except for the final examination is unalterable, but I will never add additional work to that listed in the syllabus.

All readings must be read prior to the class session that they are assigned. You must keep up with the schedule. Do not fall behind!

Schedule: Readings are due prior to the class session for which they are assigned:**

Day	Date		Topic	Readings	Due
1	Aug.	19	Beyond Maps		
2		21	Planning Maps	DBM 1	
4		26	GIS Data	MA 1	

Day	Date		Topic	Readings	Due
5		28			
-	Sept.	2	No Class		
7		4	Managing GIS Data	MA 2	
9		9			
10		11	Coordinate Systems	MA 3	
12		16			
13		18	Mapping GIS Data	MA 4	
15		23			
16		25	Exam 1		
18		30	Basemap Basics	DBM 2	
19	Oct.	2	Explaining Maps	DBM 3	
21		7	Publishing & Sharing Maps	DBM 4	
22		9	Type Basics	DBM 5	
23		14	Labeling Maps	DBM 6	
24		16	Color Basics	DBM 7	
26		21	Color on Maps	DBM 8	
27		23	Customizing Symbols	DBM 9	
29		28	Exam 2		

Day	Date		Topic	Readings	Due
30		30	Presenting GIS Data	MA 5	
32	Nov.	4			
33		6	Attribute Data	MA 6	
35		11			
36		13	Basic Editing	MA 7	
38		18			
39		20	Queries	MA 8	
41		25			
-		27-29	No Classes		
42	Dec.	2	Spatial Joins	MA 9	
43		4			
-		?	FINAL EXAM (cumulative)		

Price, *Mastering ArcGIS*

Brewer, *Designing Better Maps*

From: Eric Jerde
To: Gabria W. Sexton
Subject: ESS & GEO courses
Date: Tuesday, December 3, 2019 10:58:01 AM

Gabria,

Here is a note describing what we're planning for the future GIS courses. The changes currently proposed to make the GEO courses 2-2-3 format (GEO 349, 351, 353, & 355) are in line with our current ESS courses (ESS 330, 331, 455, & 401). It is our plan in the next curricular cycle to propose equation of our courses with the GEO ones, which will align the course numbering. We will undertake this next Fall with the accompanying program revisions that will be required with the new numbers.

We in PHES are entirely in support of the efforts being made this year with regard to the GEO courses.

Cheers,

Eric Jerde
Chair
Department of Physics, Earth Science & Space Systems Engineering
123 Lappin Hall
Morehead State University
Morehead, KY 40351
Phone: 606.783.5406
Email: e.jerde@moreheadstate.edu
www.moreheadstate.edu/College-of-Science/Earth-and-Space-Sciences

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	GEO 351 Geographical Information Systems
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities, & Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Chris Howes Chris Howes (X) Approved ( ) Disapproved 10-21-2019
Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.24.19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11-25-19
College Curriculum Committee (Sign and Print) Date

John Ernst (✓) Approved ( ) Disapproved 11-25-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corcoran (✓) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

[illegible] (✓) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GEO 351 Geographical Information Systems
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudil College of Arts, Humanities, & Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☑	If an Information Technology signature is required, it has been obtained.	☐
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☑	The course title, department, and college names correspond to the current catalog.	☐
☑	Course teaching workload, formula, and semesters taught are specified.	☐
☑	The course description EXACTLY matches the course description stated in the syllabus.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☑	Responses are complete and applicable for each question.	☐
☑	If the course requires the use of live animals, the IACUC form is attached.	☐
☑	The syllabus starts on a separate page.	☐
☑	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☐
☑	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☑	The syllabus contains the academic term with date.	☐
☑	The syllabus contains the instructor's name.	☐
☑	The syllabus contains the office location.	☐

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☐
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☐
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☐
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☐
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☐
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☐
☑	The syllabus contains a grading description and distribution (please be very specific).	☐
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☐
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☐
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☐
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☐
☑	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Timothy Hare — Timothy Hare — 10-15-2019

Originator (Sign and Print) — Approval Date

Scott Davis — 10-22-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ New Course ☒ Revised Course

Course Name (as listed in the current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	GEO	351	Geographic Information Systems	3-0-3	3	Spring
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	GEO	351	GIS 2	2-2-3	3	Fall

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Geography Minor

This is a ☐ required course. This is an ☒ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

GEO 351 - GIS 2
(2-2-3) Practical application of GIS and geospatial technologies to advanced visualization and modeling procedures. This course provides practical training in the application of spatial data collection/creation, manipulation, analysis, and display techniques using geospatial information systems to complex problems. Credits 3. Corequisite GEO351L. Prerequisite GEO349 or ESS330. Equates with ESS331.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

This revision is a part of a general revision of all GEO prefix GIS courses to clearly tie them together as a coherent set. All four courses (GEO349, GEO351, GEO353, GEO355) require substantial lab time. The names of GEO349 and GEO351 are being revised to clearly show students their two sequence relationship as the foundational GIS courses. The course levels of GEO353 and GEO355 are being updated to accurately reflect their advanced nature building on basic skills developed in GEO349 and GEO351. Prerequsities are being updated to show students that they must complete GEO349 before any of the other three courses (GEO351, GEO353, GEO355). The name of GEO355 is being revised to more clearly state the subject of the course. The course numbers of GEO353 and GEO355 are being revised to better match their corresponding courses in ESS (401 and 455). GEO 353 is being revised to include lab time because the content requires substantial computer lab work by the students and to match the course number of ESS455 so they may be equated.

B. Justify the proposed instructional level (100-600) or instructional level change.

Spatial-data relationships can be complex and students will need to understand them to engage in project-based inquiry and presentation. The course is highly integrative and requires students to build on previously learned information and assemble it into new constructs. Thus this course is appropriate for the 300-level because students will have completed the other material at the 100- and 200-level.

C. List the student learning outcomes for the course.

- Describe the tools available for the creation, maintenance, and analysis of geographical data.
- Apply appropriate decision-making skills and geospatial technologies to practical problems.
- Appreciate the practical and theoretical concerns with producing high quality spatial output (paper and virtual maps charts and figures).
- Describe the intellectual tools that GIS users have to "make sense" of physical and social contexts.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

1. Students will complete a series of laboratory assignments including quizzes, exercises, and map products; objective scoring.
2. Students will complete three exams; including objective questions and essay scored by rubrics.
3. Students will produce a series of map products; scored by a rubric.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

The course helps students to develop skills in the understanding and use of geospatial technologies that are fundamental to mapping and geographical analysis in a variety of fields and applications.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The course helps students to develop skills in the understanding and use of geospatial technologies that are fundamental to mapping and geographical analysis in a wide variety of fields including business geomatics, environmental science, surveying, political science, criminology, sociology, and many others. These skills are powerful tools to help graduates compete in the job market. These skills provide a foundation for student success in a global environment and foster innovation and creative thinking.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

ESS331 Geospatial Science II was created to provide GEO351 for ESS students.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

a. requires the course
b. offers the course as an elective
c. offers a similar course
d. has an equated course
e. has the course listed as a co-requisite or pre-requisite
f. shares staff and/or resources

At this time, no single department can staff and provide all resources for GEO351 or the other GIS-related courses. The Space Science Program is funding the necessary software. IT provides the necessary hardware. Staffing is provided collaboratively by Sociology, Social Work, & Criminology, Hist, Phil, Pol, I'nt & Legal Studies, Agricultural Sciences, and Engineering & Technology Mgt. Earth and Space Science intends to include appropriate skills in a future hire.

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Chris Howes, IT - email
Eric Jerde, Chair EASS - verbal & email
Joe Curd, instructor SECS - verbal & email
Ahmed Zargari, Associate Dean SECS - verbal & email
Joyce Stubbs, Chair AGSI - email
Dianna Murphy - AD SHSS - verbal & email
Jason Holcomb, Associate Professor of Precision Agriculture/GIS and Geography - verbal & email

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Timothy Hare - PhD - Professor fo Anthropology
Dr. Hare works as a regional analyst and divides his time between the spatial analysis of social, economic, and health factors across central Appalachia, and the study of regional socioeconomic transformations in ancient Mesoamerican societies. Both research agendas entail extensive and sophisticated use of a wide variety of geospatial technologies, especially geographical information

systems. His PH.D. dissertation applies GIS to mapping, modeling, and spatial statistics of regional settlement in the Aztec Empire. Since then, he has directed numerous projects aimed at reconstructing the dynamic changes in political and economic institutions in contemporary Appalachia and Pre-Columbian Aztec and Maya societies. He has co-directed archaeological investigations at the ancient city of Mayapán in Mexico since 2001. His anthropological work appears in Latin American Antiquity, Anthropos, The Journal of Archaeological Research, The Journal of Archaeological Science, and Remote Sensing.
His archaeological research agenda continues to expand the regional database of the ancient Maya. He integrates the final products of fieldwork using survey-grade global positioning systems (GPS), aircraft and drone-based laser scanning, and drone-based photogrammetry within GIS with traditional archaeological and environmental data to provide the foundation for data analysis and for answering anthropological research questions.
Joe Curd - MS - Geography - Instructor
Jason Holcomb - PhD - Geography-Associate Professor of Precision Agriculture/GIS and Geography

B. Identify external adjunct faculty, if appropriate.

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.
Approximately 20; determined by capacity of available computer labs.

B. Desired implementation date for the course.
Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
Lecture & laboratory

D. Additional facilities and special equipment needs for this course, if any.
The course is taught using software by ESRI, including ArcGIS Desktop, ArcGIS Pro, and ArcGIS Online.
IT is maintaining computer labs with the appropriate software in Ginger 213 and Lloyd Cassity 305.

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☒ **Yes** ☐ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?
Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**
If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process

- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

GEO 351: GIS 2 - Corequisite GEO351L

Morehead State University - Caudill College Arts, Humanities, & Social Sciences

School of Humanities & Social Sciences

Department of History, Philosophy, Politics, Global Studies, & Legal Studies

Fall 2020: MW 3:00-4:15/4:50pm; Ginger 213

Instructor: Timothy S. Hare

Office: 350B Rader Hall

Telephone: 606-783-9436

E-mail: t.hare@moreheadstate.edu

Office Hours: MWF 10:00-11:00 pm, TTh 2:00-3:00 am & by appointment

Sources of all Course Information:

1. This syllabus
2. Blackboard

Official Course Description

GEO 351 – GIS 2
(2-2-3) Practical application of GIS and geospatial technologies to advanced visualization and modeling procedures. This course provides practical training in the application of spatial data collection/creation, manipulation, analysis, and display techniques using geospatial information systems to complex problems. Corequisite GEO351L. Prerequisite GEO349 or ESS330. Equates with ESS331.

Course Overview:

People in government, business, and academia realize that "space" is a fundamental component of the physical and social realms in which we live. They understand that the ability to rapidly create and analyze maps is central to many fields. GIS in many forms provide powerful tools for the collection, management, and analysis of data with spatial components.

Recent developments in the capabilities and usability of GIS coincide with the creation of massive geo-referenced databases that incorporate "space" into science, business, and government. Government officials use GIS to manage properties, regulate land-use zones, and manage environmental and cultural resources. Business people use GIS to locate the most advantageous

locations for retail outlets, manage projects, and route transportation and delivery services. Academics apply GIS in almost every field of endeavor. Sociologists incorporate GIS into census analyses. Political scientists use GIS to investigate spatial variability on voter activities and choices. Ecologists use GIS to investigate environmental systems over larger areas and at finer levels of detail than was possible previously.

Growth in GIS is generating a demand for skilled individuals and specialists in data manipulation, analysis, and display. Non-specialists in many fields need to understand the characteristics of spatial data and how to use them effectively. GIS specialists are needed to develop and maintain growing spatial databases. In either case, it is essential to develop an understanding of spatial data (their collection, organization, transformation, etc.), spatial data manipulation techniques (data classification, thematic mapping, interpolation, overlay analysis, buffering, etc.), and rigorous methods for using these data and tools for investigating important issues.

In addition, the understanding of the fundamentals of cartography is increasingly essential as maps begin to play even more important roles in decision-making and research. The goal of this course is to provide a solid foundation in each of these areas.

Course Specifics:

This course emphasizes the hands-on application of GIS technology to real-world problems and issues. It explores cartography from the perspective of generating maps that support particular types of analyses and communicate spatial information accurately and clearly. It focuses on the nature of spatial data, including their creation, transformation, and analysis.

Class sessions include a mix of lecture/discussion and hands-on applications/labs. Lecture/discussion focuses on developing an understanding of cartographic and GIS concepts. Lab sessions focus on practical implementation of these concepts on the computer. Lab activities use ESRI's ArcGIS for spatial data creation, management, exploration, and mapping.

When the course concludes, participants will have gained an appreciation for both the tools available for the creation, maintenance, and analysis of geographical data and the practical and theoretical concerns with producing high quality spatial output (maps). They will also learn the intellectual tools that geographers and other GIS users have for "making sense" of the physical and social contexts in which we live.

Course Goals:

The fundamental aim of the course is to provide the background and skills to select and apply appropriate cartographic and GIS skills to solving real-world problems and issues. More specifically, students will:

- Describe the tools available for the creation, maintenance, and analysis of geographical data.
- Apply appropriate decision-making skills and geospatial technologies to practical problems.

- Appreciate the practical and theoretical concerns with producing high quality spatial output (paper and virtual maps charts and figures).
- Describe the intellectual tools that GIS users have to "make sense" of physical and social contexts.

Program Competencies	Course Objectives/SLOs	Measures
Be able to interpret and use a variety of maps, as well as demonstrate proficiency in storage, management, and manipulation, and display of geographic data in order to answer research questions and solve problems	Demonstrate knowledge of the tools available for the creation, maintenance, and analysis of geographical data	Quizzes, lab exercises
"	Use the tools available for the creation, maintenance, and analysis of geographical data	Lab exercises
"	Understand the practical and theoretical issues and challenges with producing high quality spatial output (paper & virtual maps, charts, & figures)	Exams
Demonstrate appropriate content knowledge of core geographic concepts	Comprehend the intellectual tools that geographers and other GIS users have for "making sense" of physical and social contexts	Exams
Be able to conduct original research, and communicate research results effectively in written and oral formats	Apply decision-making skills in using appropriate geospatial technologies to practical problems	Map products

Course Texts:

We will read the following two books; all are available at the campus bookstore and online.

Price, Maribeth. 2019 *Mastering ArcGIS*. Eighth Edition. McGraw-Hill Higher Education, Boston. ISBN10: 1259929655 ISBN13: 9781259929656. This is a comprehensive handbook to using ArcGIS. Each chapter provides detailed explanations, video demonstrations, and laboratory exercises that help explain the practical application of ArcGIS. It will be essential reading for completing lab exercises

during the class. It will also become an essential guidebook to keep next to your computer as you become a professional in GIS.

McKenney, Mark, and Markus Schneider. 2016. *Map Framework : A Formal Model of Maps As a Fundamental Data Type in Information Systems*. Cham, Switzerland: Springer. doi:10.1007/978-3-319-46766-5. ISBN: 9783319467665, 3319467662. This is a brief introduction to the theory underlying geospatial information systems and sciences.

Academic Expectations:

This course uses a variety of learning and teaching styles including lectures/discussions, readings, self-tests, laboratory exercises, exams, and a final project. You should strive to be active and engaged. I expect you to attend class, participate actively in discussions and other class activities, read the texts carefully in accordance with the schedule, and complete the assignments in a timely fashion. Lab exercises will often require additional time outside of the scheduled class period. You must assume an active role in ensuring the success of the class and your mastery of the material by asking questions, telling me when my answers are unclear or fail to grasp the intent of your questions, and informing me of how well you are learning the material.

Evaluation Methods:

Course grades are based on quizzes, laboratory exercises, map products, exams, attendance, and participation.

Activity	Point Distribution
Quizzes	15%
Lab Exercises	30%
Map Products	20%
Exams	25%
Participation	10%
Attendance	*

Daily Activities/Quizzes: The textbooks are meant to be read prior to the sessions for which they are assigned. In order to encourage reading, there will be a variety of daily activities designed to demonstrate that you have completed the readings and thought about them.

Self-tests & participation: You should keep up with the readings and come to class prepared to answer questions, ask questions, and engage in general discussion. At the end of every non-lab session, everyone will have 5-10 minutes to write down the information covered in class for that day (as long as I don't run overtime). Current research indicates that people retain information better if tested immediately after learning and periodically afterward.

Hands-on experience is the foundation for successfully learning GIS. Class sessions used for **laboratory activities and exercises** are aimed at building familiarity with GIS software and spatial data. Exercises will become more sophisticated as we investigate new techniques and problems.

The **two exams** cover all materials from lectures, discussions, and texts, prior to the exam dates. The second and third exams are not cumulative, but strong understanding of earlier material is essential. The exams are composed of multiple choice questions, short essays, and diagrams. Make-up exams are discouraged and instructor approval is required prior to missing exams.

Your semester work will culminate in the creation of a **conference-style poster/map and short report**. Each student will plan and conduct a GIS-oriented project on a topic of their choosing. The primary purpose is to demonstrate sound cartographic design principles and mastery of basic ArcGIS functionality. Each project will be summarized as a conference-style research poster/map, and written up as a short report. I will provide a detailed outline of each component of the project as the semester proceeds. Due dates are identified in the course outline. The project poster will follow standard conference guidelines and summarize the goals, methods, and results of your research. The posters will be presented publicly during the final-exam period.

Attendance * is mandatory. **Attendance** is essential to learning cartography and GIS. *Each student is allowed 2 unexcused absences*. Subsequently, *you will lose ½ of a letter grade per unexcused absence*. Attendance will be taken regularly. If you arrive late to class, you are responsible for letting me know after class that you were present.

Missed exams or assignments resulting from unexcused absences will receive zeros. Excused absences will be granted when students contact me before class with approved explanations such as illness or family emergency. Please see the section on absence in the *MSU Undergraduate Catalog* for further guidance.

All assignments must be submitted via Blackboard. *All assignments are to be turned in by the beginning of class on the date they are due.*

Grading:

Grading is a process of both subtraction and addition. Points will be lost for errors and deficiencies and awarded for insightful statements, critical thinking, and imaginative thought. A correct essay and/or response does not guarantee a perfect grade. Some responses are correct while other responses are correct and show evidence of synthesis, insight, creative thinking, care, and writing skills.

Given the importance of writing in almost any endeavor today, I pay close attention to writing style as well as content. I encourage you to submit drafts of your essays early. I will read and comment on them without grading. I strongly encourage everyone to visit the Tutoring & Learning Center (Camden Carroll Library First Floor). I know no one who would not benefit from support in writing (including myself).

Following the MSU Undergraduate Catalog, I will employ the following grading system:

Letter	Quality	Score
A	Excellent	90-100%
B	Good	80-90%
C	Average	70-80%
D	Below Average	60-70%
E	Failure	<60%

Please note that assignments that satisfy instructions and provide the basic material will merit a C. To enter the B range, you must display superior work. This involves synthesis, critical reflection, individual insight, etc. To enter the A level, I will look for an "exceptionally high" degree of intellectual rigor. We will discuss these criteria in greater detail as the semester progresses.

Academic Honesty:

All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog (http://moreheadstate.smartcatalogiq.com/2018-2019/Undergraduate-Catalog/Administrative-Policies-and-Procedures/Academic-Honesty-Policy).

Americans with Disabilities Act (ADA):

Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.

Campus Safety Statement:

Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/

Course Schedule:

This schedule can, and likely will, change. A lecture, discussion, or lab exercise might take longer than I anticipate. Nothing except for the final examination is unalterable, but I will never add additional work to that listed in the syllabus.

All readings must be read prior to the class session that they are assigned. You must keep up with the schedule. Do not fall behind!

Schedule: Readings are due prior to the class session for which they are assigned:**

Day	Date		Topic	Readings	Due
1	Aug.	19	GIScience		
2		21	Future Developments in GIS		
4		26	GIS Basics & Review		
5		28	"		
-	Sept.	2	No Class		
7		4	Map Overlay & Geoprocessing	MA 10	
9		9	"		
10		11	Raster Analysis	MA 11	
12		16	"		
13		18	Editing & Topology	MA 12	

Day	Date		Topic	Readings	Due
15		23	"		
16		25	Extending Geodatabases	MA 13	
18		30	"		
19	Oct.	2	Metadata	MA 14	
21		7	"		
22		9	Exam 1		
23		14	Concepts of Maps	MF 1	
24		16	Maps as a Fundamental Type	MF 2	
26		21	PLR Partitions	MF 3	
27		23	Foundational Operations	MF 4	
29		28	Constructing Map Operations	MF 5	
30		30	Extended Operations	MF 6	
32	Nov.	4	Topological Relationships	MF 7	
33		6	A Discrete Model of Maps	MF 8	
35		11	Implementing Map2D	MF 9	
36		13	Exam 2		
38		18	GIS Applications		
39		20	Crime Mapping & Analysis	BYOR	

Day	Date		Topic	Readings	Due
41		25	Geology	BYOR	
-		27-29	No Classes		
42	Dec.	2	Agriculture	BYOR	
43		4	Business	BYOR	
-		?	FINAL EXAM (cumulative)		

Price, *Mastering ArcGIS*

McKenney & Schneider, *Map Framework*

From: Eric Jerde
To: Gabria W. Sexton
Subject: ESS & GEO courses
Date: Tuesday, December 3, 2019 10:58:01 AM

Gabria,

Here is a note describing what we're planning for the future GIS courses. The changes currently proposed to make the GEO courses 2-2-3 format (GEO 349, 351, 353, & 355) are in line with our current ESS courses (ESS 330, 331, 455, & 401). It is our plan in the next curricular cycle to propose equation of our courses with the GEO ones, which will align the course numbering. We will undertake this next Fall with the accompanying program revisions that will be required with the new numbers.

We in PHES are entirely in support of the efforts being made this year with regard to the GEO courses.

Cheers,

Eric Jerde
Chair
Department of Physics, Earth Science & Space Systems Engineering
123 Lappin Hall
Morehead State University
Morehead, KY 40351
Phone: 606.783.5406
Email: e.jerde@moreheadstate.edu
www.moreheadstate.edu/College-of-Science/Earth-and-Space-Sciences

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	GEO 353 GIS Applications
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities, & Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Chris Howes Chris Howes (X) Approved ( ) Disapproved 10-21-2019
Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.24.19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11-25-19
College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-25-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch ( ) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GEO 353 GIS Applications
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudil College of Arts, Humanities, & Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☑	If an Information Technology signature is required, it has been obtained.	☐
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☑	The course title, department, and college names correspond to the current catalog.	☐
☑	Course teaching workload, formula, and semesters taught are specified.	☐
☑	The course description EXACTLY matches the course description stated in the syllabus.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☑	Responses are complete and applicable for each question.	☐
☑	If the course requires the use of live animals, the IACUC form is attached.	☐
☑	The syllabus starts on a separate page.	☐
☑	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☐
☑	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☑	The syllabus contains the academic term with date.	☐
☑	The syllabus contains the instructor's name.	☐
☑	The syllabus contains the office location.	☐

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Timothy Hare — Timothy Hare — 10-15-2019

Originator (Sign and Print) — Approval Date

Scott Dawson — 10-22-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ New Course ☒ Revised Course

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)	GEO	353	GIS Applications	3-0-3	3	Spring
Proposed Course Name	GEO	455	GIS Applications	2-2-3	3	Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Geography Minor

This is a ☐ required course. This is an ☒ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

GEO 455 - GIS Applications
(2-2-3) Project-oriented practical exploration of applying GIS and geospatial technologies to different types of subjects, fields, and problems. The course addresses discipline-based implementation of geospatial technologies through real-world examples, hands-on practice, and advanced independent projects. Corequisite GEO455L. Prerequisite GEO351 or ESS331. Equated with ESS455.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

This revision is a part of a general revision of all GEO prefix GIS courses to clearly tie them together as a coherent set. All four courses (GEO349, GEO351, GEO353, GEO355) require substantial lab time. The names of GEO349 and GEO351 are being revised to clearly show students their two sequence relationship as the foundational GIS courses. The course levels of GEO353 and GEO355 are being updated to accurately reflect their advanced nature building on basic skills developed in GEO349 and GEO351. Prerequsities are being updated to show students that they must complete GEO349 before any of the other three courses (GEO351, GEO353, GEO355). The name of GEO355 is being revised to more clearly state the subject of the course. The course numbers of GEO353 and GEO355 are being revised to better match their corresponding courses in ESS (401 and 455). GEO 353 is being revised to include lab time because the content requires substantial computer lab work by the students and to match the course number of ESS455 so they may be equated.

B. Justify the proposed instructional level (100-600) or instructional level change.

Spatial-data relationships can be complex and students will need to understand them to engage in project-based inquiry and presentation. The course is highly integrative and requires students to build on previously learned information and assemble it into new constructs. Thus this course is appropriate for the 400-level because students will have completed the other material at the 100- and 200-level.

C. List the student learning outcomes for the course.

1. Build an understanding of the breadth of GIS applications.
2. Learn how to implement a variety of data acquisition and processing strategies.
3. Practice applying GIS skills to a variety of applications.
4. Develop a focused understanding of a particular field of GIS application.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

1. Students will complete a series of laboratory assignments including quizzes; objective scoring.
2. Students will complete directed research applying GIS techniques and write a final report; scored by rubric.
3. Students will produce a written report reviewing GIS applications in a particular subject area; scored by a rubric.
4. Students will produce and present an oral report reviewing GIS applications in a particular subject area; scored by a rubric.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

The course helps students to develop skills in the understanding and use of geospatial technologies that are fundamental to mapping and geographical analysis in a variety of fields and applications.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The course helps students to develop skills in the understanding and use of geospatial technologies that are fundamental to mapping and geographical analysis in a wide variety of fields including business geomatics, environmental science, surveying, political science, criminology, sociology, and many others. These skills are powerful tools to help graduates compete in the job market. These skills provide a foundation for student success in a global environment and foster innovation and creative thinking.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

ESS455 Geospatial Science Applications was created to provide GEO353 for ESS students.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

At this time, no single department can staff and provide all resources for GEO351 or the other GIS-related courses. The Space Science Program is funding the necessary software. IT provides the necessary hardware. Staffing is provided collaboratively by Sociology, Social Work, & Criminology, Hist, Phil, Pol, I'nt & Legal Studies, Agricultural Sciences, and Engineering & Technology Mgt. Earth and Space Science intends to include appropriate skills in a future hire.

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Chris Howes, IT - email
Eric Jerde, Chair EASS - verbal & email
Joe Curd, instructor SECS - verbal & email
Ahmed Zargari, Associate Dean SECS - verbal & email
Joyce Stubbs, Chair AGSI - email
Dianna Murphy - AD SHSS - verbal & email
Jason Holcomb, Associate Professor of Precision Agriculture/GIS and Geography - verbal & email

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Timothy Hare - PhD - Professor fo Anthropology
Dr. Hare works as a regional analyst and divides his time between the spatial analysis of social, economic, and health factors across central Appalachia, and the study of regional socioeconomic transformations in ancient Mesoamerican societies. Both research agendas entail extensive and sophisticated use of a wide variety of geospatial technologies, especially geographical information

systems. His PH.D. dissertation applies GIS to mapping, modeling, and spatial statistics of regional settlement in the Aztec Empire. Since then, he has directed numerous projects aimed at reconstructing the dynamic changes in political and economic institutions in contemporary Appalachia and Pre-Columbian Aztec and Maya societies. He has co-directed archaeological investigations at the ancient city of Mayapán in Mexico since 2001. His anthropological work appears in Latin American Antiquity, Anthropos, The Journal of Archaeological Research, The Journal of Archaeological Science, and Remote Sensing.
His archaeological research agenda continues to expand the regional database of the ancient Maya. He integrates the final products of fieldwork using survey-grade global positioning systems (GPS), aircraft and drone-based laser scanning, and drone-based photogrammetry within GIS with traditional archaeological and environmental data to provide the foundation for data analysis and for answering anthropological research questions.
Joe Curd - MS - Geography - Instructor
Jason Holcomb - PhD - Geography-Associate Professor of Precision Agriculture/GIS and Geography

B. Identify external adjunct faculty, if appropriate.

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.
Approximately 20; determined by capacity of available computer labs.

B. Desired implementation date for the course.
Spring 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
Lecture & laboratory

D. Additional facilities and special equipment needs for this course, if any.
The course is taught using software by ESRI, including ArcGIS Desktop, ArcGIS Pro, and ArcGIS Online.
IT is maintaining computer labs with the appropriate software in Ginger 213 and Lloyd Cassity 305.

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☒ **Yes** ☐ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?
Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**
If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process

- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

GEO 455: GIS Applications - Corequisite GEO455L

Morehead State University - Caudill College Arts, Humanities, & Social Sciences

School of Humanities & Social Sciences

Department of History, Philosophy, Politics, Global Studies, & Legal Studies

Fall 2020: MW 3:00-4:15/4:50pm; Ginger 213

Instructor: Timothy S. Hare

Office: 350B Rader Hall

Telephone: 606-783-9436

E-mail: t.hare@moreheadstate.edu

Office Hours: MWF 10:00-11:00 pm, TTh 2:00-3:00 am & by appointment

Sources of all Course Information:

1. This syllabus
2. Blackboard

Official Course Description

GEO 455 – GIS Applications

(2-2-3) Project-oriented practical exploration of applying GIS and geospatial technologies to different types of subjects, fields, and problems. The course addresses discipline-based implementation of geospatial technologies through real-world examples, hands-on practice, and advanced independent projects. Corequisite GEO353L. Prerequisite GEO351 or ESS331. Equated with ESS455.

Course Overview:

This course reviews the broad range of projects and questions that Geographic Information Systems are routinely used to address. People in diverse fields use GIS to manage, query, and analyze spatially-referenced data. In fact, GIS is essential to the functioning of many government agencies, businesses, and researchers. For instance, government officials use GIS for determining property lines, regulating land-use zones, and managing environmental and cultural resources. GIS is essential in business for locating the most advantageous locations for retail outlets, managing large development projects, and routing transportation and delivery services. Academics apply GIS in almost every field of endeavor. Sociologists use GIS for census analyses. Political scientists use GIS to investigate spatial variability on voter activities and choices. Ecologists use GIS to investigate complex environmental systems.

In addition, the advancement in the capabilities and usability of GIS and associated geospatial technologies, such as remote sensing, is creating massive quantities of geo-referenced data. The explosion in available data and data acquisition technologies has facilitated the incorporation of "space" into science, business, and policy decision-making, but has also complicated the process of data compilation and processing.

Given the specialized technical nature of geospatial technologies, plethora of different GIS applications, and the flood of geospatial data and technologies, the best way to learn GIS is to undertake hands-on projects related to many different fields. Hence, students will conduct numerous projects based on real-world examples that will provide the opportunity for extensive hands-on practice. This will also provide essential reinforcement of techniques learned in previous GIS courses, including GEO349 and GEO351.

Course Goals

This course systematically investigates numerous realms of GIS applications and emphasizes the hands-on application of GIS technology to real-world problems and issues. We will strive to:

1. Describe the breadth of GIS applications.
2. Implement a variety of data acquisition and processing strategies.
3. Apply GIS skills to a variety of applications.
4. Demonstrate a focused understanding of a particular field of GIS application.

Program Competencies	Course Objectives/SLOs	Measures
Be able to interpret and use a variety of maps, as well as demonstrate proficiency in storage, management, and manipulation, and display of geographic data in order to answer research questions and solve problems	Practice applying GIS skills to a variety of applications	Quizzes, lab exercises
"	Learn how to implement a variety of data acquisition and processing strategies	Quizzes, lab exercises
Demonstrate appropriate content knowledge of core geographic concepts	Build an understanding of the breadth of GIS applications	Subject paper & presentation
Be able to conduct original research, and communicate research results effectively in written and oral formats	Develop a focused understanding of a particular field of GIS application	Final project

Class sessions include a mix of lecture/discussion and hands-on applications. Lecture/discussion will focus on developing an understanding of various GIS applications and extending current skills into new areas. Lab sessions will focus on practical application of GIS to real-world situations. Lab activities will primarily use ArcGIS for spatial data creation, management, exploration, and mapping. Exercises will require additional time outside of the scheduled class period. When the course concludes, you will have gained an appreciation for the range of GIS practice and enhanced your own skills for the creation, maintenance, and analysis of geographical data.

Course Texts:

We will read several articles and the following three books; all are available at the campus bookstore.

Required: We will read selections from the following books.

Longley, Paul, Michael F Goodchild, D. J Maguire, and David Rhind. 2015. *Geographic Information Systems Science*. Fourth. Hoboken, New Jersey: John Wiley & Sons.

Supporting Texts: Each student will follow their own path focused on their particular field of study. The following textbooks provide supplemental tutorials for building GIS skills targeting specific applications. Additional support resources may be used depending on field of application.

Gorr, Wilpen L, Kristen Seamens Kurland, and Zan M Dodson. 2018. *Gis Tutorial for Crime Analysis*. Second. Redlands, California: Esri Press.

Kurland, Kristen Seamens, and Wilpen L Gorr. 2014. Gis *Tutorial for Health* (version Fifth edition.). Fifth. Redlands, Calif.: Esri Press.

Harder, Christian, Tim Ormsby, and Thomas Balstrøm. 2013. *Understanding Gis : An Arcgis Project Workbook*. 2nd ed. Redlands, Calif.: Esri Press.

Greene, Richard P, and James B Pick. 2012. *Exploring the Urban Community : A Gis Approach*. 2nd ed. Pearson Prentice Hall Series in Geographic Information Science. Upper Saddle River, NJ: Pearson Prentice Hall.

Peters, Dave. 2012. *Building a Gis : System Architecture Design Strategies for Managers* (version 2nd ed.). 2nd ed. Redlands, Calif.: ESRI Press.

Ballas, Dimitris, Graham Clarke, Rachel S Franklin, and Andy Newing. 2018. *Gis and the Social Sciences : Theory and Applications*. Abingdon, Oxon: Routledge.

Mueller, Tom, and Gretchen Sassenrath. 2015. *GIS Applications in Agriculture, Volume Four: Conservation Planning*. CRC Press.

Zhang, Qin, ed. 2016. *Precision Agriculture Technology for Crop Farming*. Boca Raton, FL: CRC Press.

Optional: These texts provide essential background and support for the implementation of a a wide variety of GIS skills.

Brewer, Cynthia A. 20015. *Designing Better Maps: A Guide for GIS Users*. Redlands, CA: ESRI Press. ISBN-13: 978-1589484405 ISBN-10: 1589484401. This is a comprehensive overview of digital cartography. You will gain an understanding of how to create maps that communicate complex ideas clearly.

Price, Maribeth. 2019 *Mastering ArcGIS*. Eighth Edition. McGraw-Hill Higher Education, Boston. ISBN10: 1259929655 ISBN13: 9781259929656. This is a comprehensive handbook to using ArcGIS. Each chapter provides detailed explanations, video demonstrations, and laboratory exercises that help explain the practical application of ArcGIS. It will be essential reading for completing lab exercises during the class. It will become an essential guidebook to keep next to your computer as you become a professional in GIS.

Academic Expectations:

This course uses a variety of learning and teaching styles including lectures/discussions, readings, laboratory exercises, and a final project. You should strive to be active and engaged. I expect everyone to attend class, participate actively in discussions and other class activities, read the texts carefully in accordance with the schedule, and complete the assignments in a timely fashion. You must assume an active role in ensuring the success of the class and your mastery of the material by asking questions, telling me when my answers are unclear or fail to grasp the intent of your questions, and informing me of how well you are learning the material.

Evaluation Methods:

Course grades are based on quizzes, laboratory exercises, a subject paper, a subject presentation, final project, attendance, and participation.

Activity	Point Distribution
Quizzes	20%
Lab Exercises	20%
Subject Paper	15%
Subject Presentation	15%
Final Project	20
Participation	10%
Attendance	*

Daily Activities/Quizzes: The textbooks are meant to be read prior to the sessions for which they are assigned. In order to encourage reading, there will be a variety of daily activities designed to demonstrate that you have completed the readings and thought about them.

Laboratory Exercises. Hands-on experience and practice are the foundation for successfully learning GIS. **Lab exercises** are aimed at building familiarity with a broad range of GIS applications as well as enhancing basic GIS skills. Exercises will become more sophisticated as we investigate new techniques and problems. Each laboratory exercise will culminate in a very short report. Report formats will vary, including brief in-class demonstrations, cartographic output (maps), and short reports.

Subject Paper & Presentation. You will investigate and report on a particular field and how it employs GIS. You may select a field from the topics listed at the end of the syllabus in which you are interested and then do a library/Internet study of how GIS is used (If you would rather do a different field, run it by me.). The project will culminate in a report presented as both a paper and a presentation (how else will everyone else benefit from your work?). Due dates are determined by the selected field/subject.

Final Project. Your semester work will culminate in the creation of a **research report**. Each student will plan and conduct a GIS-oriented research project on a topic of their choice. Each project will be written up as a research report. I will provide a detailed outline of each component of the research paper as the semester proceeds.

Participation: You should keep up with the readings and come to class prepared to answer questions, ask questions, and engage in general discussion. Hands-on experience is the foundation for successfully learning GIS. Class sessions used for **laboratory activities and exercises** are aimed at building familiarity with GIS software and spatial data. Exercises will become more sophisticated as we investigate new techniques and problems.

Attendance * is mandatory. **Attendance** is essential to learning cartography and GIS. *Each student is allowed 2 unexcused absences*. Subsequently, *you will lose ½ of a letter grade per unexcused absence*. Attendance will be taken regularly. If you arrive late to class, you are responsible for letting me know after class that you were present.

Missed exams or assignments resulting from unexcused absences will receive zeros. Excused absences will be granted when students contact me before class with approved explanations such as illness or family emergency. Please see the section on absence in the *MSU Undergraduate Catalog* for further guidance.

All assignments must be submitted via Blackboard. *All assignments are to be turned in by the beginning of class on the date they are due.*

Grading:

Grading is a process of both subtraction and addition. Points will be lost for errors and deficiencies and awarded for insightful statements, critical thinking, and imaginative thought. A correct essay and/or response does not guarantee a perfect grade. Some responses are correct while other responses are correct and show evidence of synthesis, insight, creative thinking, care, and writing skills.

Given the importance of writing in almost any endeavor today, I pay close attention to writing style as well as content. I encourage you to submit drafts of your essays early. I will read and comment on them without grading. I strongly encourage everyone to visit the Tutoring & Learning Center (Camden Carroll Library First Floor). I know no one who would not benefit from support in writing (including myself).

Following the MSU Undergraduate Catalog, I will employ the following grading system:

Letter	Quality	Score
A	Excellent	90-100%
B	Good	80-90%
C	Average	70-80%
D	Below Average	60-70%
E	Failure	<60%

Please note that assignments that satisfy instructions and provide the basic material will merit a C. To enter the B range, you must display superior work. This involves synthesis, critical reflection, individual insight, etc. To enter the A level, I will look for an "exceptionally high" degree of intellectual rigor. We will discuss these criteria in greater detail as the semester progresses.

Academic Honesty:

All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog

(http://moreheadstate.smartcatalogiq.com/2018-2019/Undergraduate-Catalog/Administrative-Policies-and-Procedures/Academic-Honesty-Policy).

Americans with Disabilities Act (ADA):

Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.

Campus Safety Statement:

Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/

Course Schedule:

Please note that this schedule can, and likely will, change. A lecture, discussion, or lab exercise might take longer than I anticipate. Nothing except for the final examination is unalterable, but I will never add additional work to that listed in the syllabus.

All readings must be read prior to the class session that they are assigned. You must keep up with the schedule. Do not fall behind!

Course Outline: (Readings are due prior to the class they are assigned)

Day	Date		Topic	Readings	Due
1	Aug.	19	Overview of GIS Applications		
2		21	What's with the "G", "I", "S", & "S"?	GISS 1	
4		26	Selecting GI Applications		
5		28	Challenge of GI Data	GISS 2	
-	Sept.	2	No Class		
7		4	Activity 1		
9		9	Representing Geography	GISS 3	
10		11	Activity 2		
12		16	Overwhelmed by Georeferencing?	GISS 4	
13		18	Activity 3		

Day	Date		Topic	Readings	Due
15		23	Confronting GI Uncertainty	GISS 5	
16		25	GI System Software	GISS 6	
18		30	Activity 4		
19	Oct.	2	Geographic Data Modeling	GISS 7	
21		7	Data Collection	GISS 8	
22		9	Activity 5		
23		14	Geographic Databases	GISS 9	
24		16	Activity 6		
26		21	The GeoWeb	GISS 10	
27		23	Cartography & Map Production	GISS 11	
29		28	Geovisualization	GISS 12	
30		30	Spatial Data Analysis	GISS 13	
32	Nov.	4	Spatial Analysis & Inference	GISS 14	
33		6	Spatial Modeling	GISS 15	
35		11	Managing GI Systems	GISS 16	
36		13	Information & Decision Making	GISS 17	
38		18	GISS in Practice	GISS 18	
39		20	Activity 7		
41		25	GISS in Society	GISS 19	
-		27-29	No Classes		
42	Dec.	2	Projects		
43		4	Project Wrap up		
-		?	Project Presentations		

From: Eric Jerde
To: Gabria W. Sexton
Subject: ESS & GEO courses
Date: Tuesday, December 3, 2019 10:58:01 AM

Gabria,

Here is a note describing what we're planning for the future GIS courses. The changes currently proposed to make the GEO courses 2-2-3 format (GEO 349, 351, 353, & 355) are in line with our current ESS courses (ESS 330, 331, 455, & 401). It is our plan in the next curricular cycle to propose equation of our courses with the GEO ones, which will align the course numbering. We will undertake this next Fall with the accompanying program revisions that will be required with the new numbers.

We in PHES are entirely in support of the efforts being made this year with regard to the GEO courses.

Cheers,

Eric Jerde
Chair
Department of Physics, Earth Science & Space Systems Engineering
123 Lappin Hall
Morehead State University
Morehead, KY 40351
Phone: 606.783.5406
Email: e.jerde@moreheadstate.edu
www.moreheadstate.edu/College-of-Science/Earth-and-Space-Sciences

COURSE

New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	GEO 355 Remote Sensing of the Environment
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities, & Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Chris Howes Chris Howes (X) Approved ( ) Disapproved 10-21-2019

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.24.19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott (✓) Approved ( ) Disapproved 11-25-19

College Curriculum Committee (Sign and Print) Date

John Ent (✓) Approved ( ) Disapproved 11-25-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

[signature] (✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GEO 355 Remote Sensing of the Enviroment
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudil College of Arts, Humanities, & Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☑	If an Information Technology signature is required, it has been obtained.	☐
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☑	The course title, department, and college names correspond to the current catalog.	☐
☑	Course teaching workload, formula, and semesters taught are specified.	☐
☑	The course description EXACTLY matches the course description stated in the syllabus.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☑	Responses are complete and applicable for each question.	☐
☑	If the course requires the use of live animals, the IACUC form is attached.	☐
☑	The syllabus starts on a separate page.	☐
☑	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☐
☑	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☑	The syllabus contains the academic term with date.	☐
☑	The syllabus contains the instructor's name.	☐
☑	The syllabus contains the office location.	☐

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Timothy Hare — Timothy Hare — 10-15-2019

Originator (Sign and Print) — Approval Date

J Scott Davison — 10-22-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ New Course ☒ Revised Course

Course Name (as listed in the current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	GEO	355	Remote Sensing of the Environment	3-0-3	3	Spring
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	GEO	401	Remote Sensing	2-2-3	3	Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Geography Minor

This is a ☐ required course. This is an ☒ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

GEO 401 Remote Sensing
(2-2-3) Introduction to principles, techniques, and applications of remote sensing. This course provides practical training in mapping and monitoring the environment through processing of satellite and aerial imagery and laser scanning. The course addresses management of facilities and inventory, urban modeling and analysis, land use management and monitoring, analysis of vegetation and landscape, and agricultural applications.
Corequisites GEO401L. Prerequisite GEO349 or ESS330. Equated with ESS401.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

This revision is a part of a general revision of all GEO prefix GIS courses to clearly tie them together as a coherent set. All four courses (GEO349, GEO351, GEO353, GEO355) require substantial lab time. The names of GEO349 and GEO351 are being revised to clearly show students their two sequence relationship as the foundational GIS courses. The course levels of GEO353 and GEO355 are being updated to accurately reflect their advanced nature building on basic skills developed in GEO349 and GEO351. Prerequsities are being updated to show students that they must complete GEO349 before any of the other three courses (GEO351, GEO353, GEO355). The name of GEO355 is being revised to more clearly state the subject of the course. The course numbers of GEO353 and GEO355 are being revised to better match their corresponding courses in ESS (401 and 455). GEO 353 is being revised to include lab time because the content requires substantial computer lab work by the students and to match the course number of ESS455 so they may be equated.

B. Justify the proposed instructional level (100-600) or instructional level change.

The course is appropriate for advanced undergraduates building on knowledge and skills from GEO349 or ESS330.

C. List the student learning outcomes for the course.

1. Explain the principles of remote sensing and the technical characteristics and constraints of Earth Observation missions.

2. Design, implement, and critically evaluate methods of digital image processing ranging from preprocessing to image classification, field data collection, and accuracy assessment.
3. Critically evaluate the opportunities and available methods for integrating remote sensing and GIS.
4. Generate geographical information by processing digital remotely sensed data and critically evaluate its use for particular applications.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or** 2. Students will complete an exam; objective test.

1. Students will complete a series of laboratory assignments including quizzes; objective scoring.
2. Students will complete exams; including objective questions and essays scored by rubrics.
3. Students will write a report and orally present/demonstrate the activities producing the report results; scored by a rubric.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

The course helps students to develop skills in the understanding and use of specific geospatial technologies related to remote sensing that are fundamental to mapping and geographical analysis in a variety of fields and applications.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The course helps students to develop skills in the understanding and use of geospatial technologies that are fundamental to mapping and geographical analysis in a wide variety of fields including business geomatics, environmental science, surveying, political science, criminology, sociology, and many others. These skills are powerful tools to help graduates compete in the job market. These skills provide a foundation for student success in a global environment and foster innovation and creative thinking.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

ESS455 Geospatial Science Applications was created to provide GEO353 for ESS students.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

At this time, no single department can staff and provide all resources for GEO351 or the other GIS-related courses. The Space Science Program is funding the necessary software. IT provides the necessary hardware. Staffing is provided collaboratively by Sociology, Social Work, & Criminology, Hist, Phil, Pol, I'nt & Legal Studies, Agricultural Sciences, and Engineering & Technology Mgt. Earth and Space Science intends to include appropriate skills in a future hire.

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Chris Howes, IT - email
Eric Jerde, Chair EASS - verbal & email
Joe Curd, instructor SECS - verbal & email
Ahmed Zargari, Associate Dean SECS - verbal & email
Joyce Stubbs, Chair AGSI - email
Dianna Murphy - AD SHSS - verbal & email
Jason Holcomb, Associate Professor of Precision Agriculture/GIS and Geography - verbal & email

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Timothy Hare - PhD - Professor fo Anthropology
Dr. Hare works as a regional analyst and divides his time between the spatial analysis of social, economic, and health factors across central Appalachia, and the study of regional socioeconomic transformations in ancient Mesoamerican societies. Both research agendas entail extensive and sophisticated use of a wide variety of geospatial technologies, especially geographical information

systems. His PH.D. dissertation applies GIS to mapping, modeling, and spatial statistics of regional settlement in the Aztec Empire. Since then, he has directed numerous projects aimed at reconstructing the dynamic changes in political and economic institutions in contemporary Appalachia and Pre-Columbian Aztec and Maya societies. He has co-directed archaeological investigations at the ancient city of Mayapán in Mexico since 2001. His anthropological work appears in Latin American Antiquity, Anthropos, The Journal of Archaeological Research, The Journal of Archaeological Science, and Remote Sensing.
His archaeological research agenda continues to expand the regional database of the ancient Maya. He integrates the final products of fieldwork using survey-grade global positioning systems (GPS), aircraft and drone-based laser scanning, and drone-based photogrammetry within GIS with traditional archaeological and environmental data to provide the foundation for data analysis and for answering anthropological research questions.
Joe Curd - MS - Geography - Instructor
Jason Holcomb - PhD - Geography-Associate Professor of Precision Agriculture/GIS and Geography

B. Identify external adjunct faculty, if appropriate.

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.
Approximately 20; determined by capacity of available computer labs.

B. Desired implementation date for the course.
Spring 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
Lecture & laboratory

D. Additional facilities and special equipment needs for this course, if any.
The course is taught using software by ESRI, including ArcGIS Desktop, ArcGIS Pro, and ArcGIS Online.
IT is maintaining computer labs with the appropriate software in Ginger 213 and Lloyd Cassity 305.

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☒ **Yes** ☐ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?
Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**
If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process

- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

GEO 401: Remote Sensing - Corequisite GEO401L

Morehead State University - Caudill College Arts, Humanities, & Social Sciences

School of Humanities & Social Sciences
Department of History, Philosophy, Politics, Global Studies, & Legal Studies
Fall 2020: MW 3:00-4:15/4:50pm; Ginger 213

Instructor: Timothy S. Hare

Office: 350B Rader Hall
Telephone: 606-783-9436
E-mail: t.hare@moreheadstate.edu
Office Hours: MWF 10:00-11:00 pm, TTh 2:00-3:00 am & by appointment

Sources of all Course Information:

This syllabus
Blackboard

Official Course Description

GEO 401 - Remote Sensing
(2-2-3) Introduction to principles, techniques, and applications of remote sensing. This course provides practical training in mapping and monitoring the environment through processing of satellite and aerial imagery and laser scanning. The course addresses management of facilities and inventory, urban modeling and analysis, land use management and monitoring, analysis of vegetation and landscape, and agricultural applications. Prerequisite GEO349 or ESS330. Equated with ESS401.

Course Overview:

This course introduces the big picture of remote sensing and then dives into the details of collecting (sensing) information and transforming it into meaningful data.
Wow! Where to start? The realm of remote sensing is undergoing a renaissance. Traditional satellite sensors are changing and being enhanced in ways undreamt of a decade ago. Unmanned aerial vehicles (UAVs) are creating new opportunities for collecting data more cheaply and at higher resolutions. Airborne Laser scanners are providing a completely new and different type of information.
The multitude of different sensor platforms and types of data are being used in business, government, and research and transforming every area of application.

Course Specifics

Class sessions include a mix of lecture/discussion and hands-on applications. Lecture/discussion focuses on developing an understanding of platforms, sensors, and how to use the results. Lab sessions focus on practical implementation of these concepts on the computer. Lab activities will use ArcGIS, Global Mapper, and Pix4DMapper for data creation, management, exploration, and analysis.

Course Goals:

The fundamental aim of the course is to provide the background and skills to select and apply appropriate platforms, sensors, and processing techniques to solving real-world problems and issues. More specifically, we will strive to:
Explain the principles of remote sensing and the technical characteristics and constraints of Earth Observation missions.
Design, implement, and critically evaluate methods of digital image processing covering preprocessing, image classification, field data collection, and accuracy assessment.
Generate geographical information by processing digital remotely sensed data and evaluating its use.
Evaluate the opportunities and available methods for integrating remote sensing and GIS.

Program Competencies	Course Objectives/SLOs	Measures
Be able to interpret and use a variety of maps, as well as demonstrate proficiency in storage, management, and manipulation, and display of	Explain the principles of remote sensing and the technical characteristics and constraints of Earth Observation missions	Quizzes, lab exercises

Program Competencies	Course Objectives/SLOs	Measures
geographic data in order to answer research questions and solve problems		
"	Design, implement, and critically evaluate methods of digital image processing ranging from preprocessing to image classification, field data collection, and accuracy assessment	Quizzes, lab exercises
Demonstrate appropriate content knowledge of core geographic concepts	Critically evaluate the opportunities and available methods for integrating remote sensing and GIS	Exams
Be able to conduct original research, and communicate research results effectively in written and oral formats	Generate geographical information by processing digital remotely sensed data and critically evaluate its use for particular applications	Subject paper & presentation

Course Texts:

We will read the following two books; all are available at the campus bookstore.

Required:

Clevers, J.G.P.W, ed. 2017. *Introduction Geo-Information Science: Remote Sensing Reader*. Wageningen: Wageningen University & Research.

Keranen, Kathryn, and Robert Kolvoord. 2014. *Making Spatial Decisions Using GIS and Remote Sensing: A Workbook*. Redlands, Calif.: ESRI Press.

Alternate: While most areas of remote sensing applications depend on collecting and processing spectral data, some depend on laser-based scanning. This text is a possible alternative for those students in disciplines more dependent on airborne laser scanning.

Keranen, Kathryn, and Robert Kolvoord. 2016. *Making Spatial Decisions Using GIS and LiDAR : A Workbook*. First. Redlands, California: Esri Press Academic.

Optional: These texts provide essential background and support for the implementation of a wide variety of GIS skills.

Brewer, Cynthia A. 20015. *Designing Better Maps: A Guide for GIS Users*. Redlands, CA: ESRI Press. ISBN-13: 978-1589484405 ISBN-10: 1589484401. This is a comprehensive overview of digital cartography. You will gain an understanding of how to create maps that communicate complex ideas clearly.

Price, Maribeth. 2019 *Mastering ArcGIS*. Eighth Edition. McGraw-Hill Higher Education, Boston. ISBN10: 1259929655 ISBN13: 9781259929656. This is a comprehensive handbook to using ArcGIS. Each chapter provides detailed explanations, video demonstrations, and laboratory exercises that help explain the practical application of ArcGIS. It will be essential reading for completing lab exercises during the class. It will become an essential guidebook to keep next to your computer as you become a professional in GIS.

Academic Expectations:

This course uses a variety of learning and teaching styles including lectures/discussions, readings, self-tests, laboratory exercises, exams, and a final project. You should strive to be active and engaged. I expect you to attend class, participate actively in discussions and other class activities, read the texts carefully in accordance with the schedule, and complete the assignments in a timely fashion. Lab exercises will often require additional time outside of the scheduled class period. You must assume an active role in ensuring the success of the class and your mastery of the material by asking questions, telling me when my answers are unclear or fail to grasp the intent of your questions, and informing me of how well you are learning the material.

Evaluation Methods:

Course grades are based on quizzes, laboratory exercises, map products, exams, attendance, and participation.

Activity	Point Distribution
Quizzes	10%
Lab Exercises	40%
Subject Paper	10%
Subject Presentation	10%
Exams	20%
Participation	10%
Attendance	*

Daily Activities/Quizzes: The textbooks are meant to be read prior to the sessions for which they are assigned. In order to encourage reading, there will be a variety of daily activities designed to demonstrate that you have completed the readings and thought about them.

The **exam** covers all materials from lectures, discussions, and texts, prior to the exam date. The exam is composed of multiple choice questions, short essays, and diagrams. Make-up exams are discouraged and instructor approval is required prior to missing exams.

Laboratory Exercises. Hands-on experience and practice are the foundation for successfully learning remote sensing. **Lab exercises** are aimed at building familiarity with a broad range of applications as well as enhancing basic skills. Exercises will become more sophisticated as we investigate new techniques and problems. Each laboratory exercise will culminate in a very short report. Report formats will vary, including brief in-class demonstrations, cartographic output (maps), and short reports.

Subject Paper & Presentation. You will investigate and apply remote sensing techniques to a particular subject. The project will culminate in a report presented as both a paper and a presentation (how else will everyone else benefit from your work?).

Participation: You should keep up with the readings and come to class prepared to answer questions, ask questions, and engage in general discussion. Hands-on experience is the foundation for successfully learning remote sensing. Class sessions used for **laboratory activities and exercises** are aimed at building familiarity with the software and remotely sensed data. Exercises will become more sophisticated as we investigate new techniques and problems.

Attendance * is mandatory. **Attendance** is essential to learning remote sensing. *Each student is allowed 2 unexcused absences*. Subsequently, *you will lose ½ of a letter grade per unexcused absence*. Attendance will be taken regularly. If you arrive late to class, you are responsible for letting me know after class that you were present.

Missed exams or assignments resulting from unexcused absences will receive zeros. Excused absences will be granted when students contact me before class with approved explanations such as illness or family emergency. Please see the section on absence in the *MSU Undergraduate Catalog* for further guidance.

All assignments must be submitted via Blackboard. *All assignments are to be turned in by the beginning of class on the date they are due.*

Grading:

Grading is a process of both subtraction and addition. Points will be lost for errors and deficiencies and awarded for insightful statements, critical thinking, and imaginative thought. A correct essay and/or response does not guarantee a perfect grade. Some responses are correct while other responses are correct and show evidence of synthesis, insight, creative thinking, care, and writing skills.

Given the importance of writing in almost any endeavor today, I pay close attention to writing style as well as content. I encourage you to submit drafts of your essays early. I will read and comment on them without grading. I strongly encourage everyone to visit the Tutoring & Learning Center (Camden Carroll Library First Floor). I know no one who would not benefit from support in writing (including myself).

Following the MSU Undergraduate Catalog, I will employ the following grading system:

Letter	Quality	Score
A	Excellent	90-100%
B	Good	80-90%
C	Average	70-80%
D	Below Average	60-70%
E	Failure	<60%

Please note that assignments that satisfy instructions and provide the basic material will merit a C. To enter the B range, you must display superior work. This involves synthesis, critical reflection, individual insight, etc. To enter the A level, I will look for an "exceptionally high" degree of intellectual rigor. We will discuss these criteria in greater detail as the semester progresses.

Academic Honesty:

All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog (http://moreheadstate.smartcatalogiq.com/2018-2019/Undergraduate-Catalog/Administrative-Policies-and-Procedures/Academic-Honesty-Policy).

Americans with Disabilities Act (ADA):

Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.

Campus Safety Statement:

Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/

Course Schedule:

This schedule can, and likely will, change. A lecture, discussion, or lab exercise might take longer than I anticipate. Nothing except for the final examination is unalterable, but I will never add additional work to that listed in the syllabus.

All readings must be read prior to the class session that they are assigned. You must keep up with the schedule. Do not fall behind!

Schedule: Readings are due prior to the class session for which they are assigned:**

Day	Date		Topic	Readings	Due
1	Aug.	19	Remote Sensing in Flux		
2		21	History & Development of RS	IGIS 1	
4		26	Spectral Signatures	IGIS 2	
5		28	RS Acquisition Systems	IGIS 3	
-	Sept.	2	No Class		

Day	Date		Topic	Readings	Due
7		4	"	"	
9		9	Preprocessing in RS	IGIS 4	
10		11	Image Processing	IGIS 5	
12		16	Exam 1		
13		18	Developing a Strategy	RS ix-xxiv	
15		23	Enhancing Images	RS 1	
16		25			
18		30	Composite Images	RS 2	
19	Oct.	2			
21		7	Spectral Signatures	RS 3	
22		9			
23		14	Land Cover	RS 4	
24		16			
26		21	Unsupervised Classification	RS 5	
27		23			
29		28	Supervised Classification	RS 6	
30		30			
32	Nov.	4	Classification Accuracy	RS 7	
33		6			
35		11	Urban Change	RS 8	
36		13			
38		18	Water	RS 9	
39		20			
41		25	Normalized Difference Vegetation Index	RS 10	
-		27-29	No Classes		
42	Dec.	2	Projects		
43		4			
-		?	Presentations		

IGIS, *Introduction Geo-Information Science: Remote Sensing Reader*
RS, *Making Spatial Decisions Using GIS and Remote Sensing: A Workbook*

From: Eric Jerde
To: Gabria W. Sexton
Subject: ESS & GEO courses
Date: Tuesday, December 3, 2019 10:58:01 AM

Gabria,

Here is a note describing what we're planning for the future GIS courses. The changes currently proposed to make the GEO courses 2-2-3 format (GEO 349, 351, 353, & 355) are in line with our current ESS courses (ESS 330, 331, 455, & 401). It is our plan in the next curricular cycle to propose equation of our courses with the GEO ones, which will align the course numbering. We will undertake this next Fall with the accompanying program revisions that will be required with the new numbers.

We in PHES are entirely in support of the efforts being made this year with regard to the GEO courses.

Cheers,

Eric Jerde
Chair
Department of Physics, Earth Science & Space Systems Engineering
123 Lappin Hall
Morehead State University
Morehead, KY 40351
Phone: 606.783.5406
Email: e.jerde@moreheadstate.edu
www.moreheadstate.edu/College-of-Science/Earth-and-Space-Sciences

COURSE

Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	GST 273 Introduction to ~~Women's~~ Gender Studies
Department (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures ***(Signatures must be handwritten; electronic signatures are not accepted.)***

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 11-12-19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11/19/19

College Curriculum Committee (Sign and Print) Date

John Ernstfon (✓) Approved ( ) Disapproved 11/21/19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GST 273
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Constance Hardesty — 11/5/19 — Approval Date

Department Curriculum Committee Chair (Sign and Print) — Sept Division — 11-5-19 — Approval Date

COURSE
Minor Revision to an Existing Course

Use this outline to report a minor modification of a previously approved course and to equate a *current* course with a new course. Minor revisions include title, prefix, course number, catalog course description, and admission requirements (test scores, pre-requisites, or co-requisites). ***Minor changes do not modify course content or the course formula.*** If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

I. COURSE

Current Course Name: (as listed in the current catalog)	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Faculty Load**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	GST	273	Introduction to Women's Studies	3	3-0-3	fall/spring
Proposed Course Name:	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Faculty Load**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	GST	273	Introduction to Gender Studies	3	3-0-3	Fall/Spring

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

We are changing the title of this course from Introduction to Women's Studies to Introduction to Gender Studies. We recently changed the titles and prefixes for the electives of our minor, but we did not change the title of this introductory course. This was an oversight. We are also changing the description slightly to make it relevant to our current focus on Gender Studies.

B. List all other departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

None

C. Explain the potential impact on the other departments and programs.

None

D. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

None

III. ADDITIONAL INFORMATION

A. If this is a change that effects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

GST 273 - Introduction to Gender Studies (3 credits) - An interdisciplinary course designed to introduce students to educational, historical, aesthetic, sociological, and political conceptions of gender within and beyond the United

States. This interdisciplinary course satisfies the SBS II requirement for general education.

Please insert (paste) any supporting documentation here. If you have no supporting information, please remove this section from your proposal.

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	GST 337 Sociology of Food
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved
Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.
Departmental Curriculum Committee

(✓) Approved ( ) Disapproved 11-12-19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11/19/19
College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-21-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12-17-19
Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-18-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GST 337
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☑	If an Information Technology signature is required, it has been obtained.	☐
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☑	The course title, department, and college names correspond to the current catalog.	☐
☑	Course teaching workload, formula, and semesters taught are specified.	☐
☑	The course description EXACTLY matches the course description stated in the syllabus.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	If the course requires the use of live animals, the IACUC form is attached.	☐
☐	The syllabus starts on a separate page.	☐
☑	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☐
☐	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☐	The syllabus contains the academic term with date.	☐
☐	The syllabus contains the instructor's name.	☐
☑	The syllabus contains the office location.	☐

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☐
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☐
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Constance Hardesty 11/12/19

Originator (Sign and Print) Approval Date

Scott Dawson 11-12-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)						
Proposed Course Name	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
	GST	337	Sociology of Food	3-0-3	3	Fall

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

This is a ☐ **required course. This is an** ☒ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

GST-337 Sociology of Food (3 Credits)

A sociological analysis of the politics, economy, and culture of food. Topics include food consumption patterns, body image, health, and eating disorders; food and individual, community and cultural identity; class, ethnic, and gender based food patterns; modern food production patterns, inequality and the environment; social food movements and social justice. Equates with SOC 337, CRIM 337 and SWK 337.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

This is a new course for GST. However, it currently exists as a SOC/SWK/CRIM course. We are proposing it as a new GST course so that it will be equated with GST

B. Justify the proposed instructional level (100-600) or instructional level change.

The readings and assignments for this course are at an upper division level. It requires that students have achieved upper division level skills for reading, writing, analyzing, and critically thinking.

C. List the student learning outcomes for the course.

The purpose of this course for students to

- Gain a deeper understanding of the role of food in defining our identity and our ties to family and community. This outcome will be measured using exams, writing assignments and reflections, and a food journal.
- Gain a deeper understanding of class, ethnic, cultural, and gender related food patterns. This outcome will be measured using exams, writing assignments and reflections. and a food journal.

- Gain a deeper understanding of the ways in which the food systems create and maintain inequality at the local, national, and global levels and explore the role of the political and legal institutions in regulating food policies. This outcome will be measured using exams, writing assignments and reflections, and written paper or project.
- Explore the ways in which the production, processing, and consumption of food have changed over time and examine the future of food especially as it relates to corporate agriculture and global inequality. Examine avenues for social change. This outcome will be measured using exams, writing assignments and reflections, and written paper or project.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

Students will complete exams, written assignments and reflections, the food journal and the final paper/projects. Specifically students will complete in-class writing assignments where they reflect on their experiences of food and how it connects them to family, community and their personal identity (outcome 1) and they will complete in-class writing and reflections responding to readings and films about food and identity (outcome 1), food patterns related to class, ethncity, culture and gender (outcome 2), food systems and inequalty (outcome 3) and global food issues and the future of food (outcome 4). These refections and writings will be assessed using rubrics. Objective exam questions will similarly assess students' understanding of the material in these readings and films (outcomes 1,2,3, and 4). The food journal will assess students' understanding of food as it relates to their personal identity and as it ties them to community and they also will reflect on how it relates to gender identity and responsibility for the environment (outcomes 1 and 2). The food journal will be assessed using a rubric. The final paper/project will assess students ability to use writing and communication skills to illustrate their understanding of food systems and inequality as well as global food issues and the future of food (outcomes 3 and 4). The final paper/project will be assessed using a rubric.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

This course will help students to achieve learning objectives for the program as follows:
1. To challenge students to use a variety of critical thinking and problem solving skills to recognize and contend with gender dynamics and inequality at the individual and social levels. The course examines gender inequality in relation to food systems around the world both in terms of access to food, control of food production, and the exploitation of labor in the food system.
2. To develop students' understanding about the ways in which different cultures socialize members into gendered roles. Variations in gendered food patterns are explored as well as the role of food in the social construction of masculinity and femininity.
3. To expand students' knowledge, skills, and consciousness regarding their choices with regard to institutionalized societal structures such as family, healthcare, education, political systems, work, and leisure. Students are made aware of the food system and their role as consumers as well as activists to create social change.
4. To inform students of the diversity and impact of contributions from individuals of various identities throughout history and across academic disciplines in a multicultural and global society. The course explores gender and food from a global perspective and uses diverse scholarship.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

- Educate Students for success in a global environment;

This course explores the food system as a vast segment of the global economy contributing to global poverty and environmental crises. Understanding the global economy is critical for students' success in a global environment.

- Engage in scholarship;

Students will read scholarly works in the area of food sociology and food justice. They will research food related topics, write papers, and make presentations on the information.

- Promote diversity of people and ideas;

The readings focus on the ways that food creates our identity as individuals and as members of diverse cultural groups based on ethnicity, geographic region, class, etc. The course examines class, ethnic, and gender based food patterns as well as class and global inequality related to access to food. Alternative approaches to consumption (i.e. veganism), production (i.e. civic agriculture), and distribution (i.e. farmers markets) of food are examined.

- Foster innovation, collaboration and creative thinking;

Students will be required to engage in critical thinking as they explore their own food consumption patterns and their place within the global food system, Students will address the social problems related to the food system and explore creative strategies for addressing these problems.

- Serve our communities to improve the quality of life.

Our modern food system creates social problems of immense magnitude including epidemic health problems, the targeting of

children by food corporations, food deserts where entire groups of people have no access to fresh food, devastation of the environment, the abuse of animals and people in the food system, and the extinction of many plants, animals, and ways of life. Students will examine avenues for social change in terms of their individual behavior, their local community and school systems, and macro level system.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.
none

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.
This course will be equated with SOC/SWK/CRIM 337 Sociology of Food

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Sociology

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)
Dr. Dianna Murphy

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.
Dr. Constance Hardesty PhD
Dr. Bernadette Barton PhD
Dr. Ned Breschel PhD

B. Identify external adjunct faculty, if appropriate.

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.
35/35 Some of these students will be enrolled under the SOC/SWK/CRIM prefixes and about 5 under the GST prefix

B. Desired implementation date for the course.
Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
class discussion, small group discussion and exercises, lecture

D. Additional facilities and special equipment needs for this course, if any.
none

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
Caudill College of Arts, Humanities and Social Sciences
School of Humanities and Social Sciences
Department of Sociology, Social Work and Criminology

SOC/CRIM/SWK 337 Sociology of Food
Fall 2020
Course Meeting: Tuesday Thursday 2:00-3:15 Rader 323

Instructor and Contact Information:

Dr. Constance Hardesty
327 Rader Hall 783-2202
c.hardes@morehead-st.edu
Office Hours: T Th 10:30 -12:30 and 3:15 to 5 and by appointment.

Catalog Course Description

A sociological analysis of the politics, economy, and culture of food. Topics include food consumption patterns, body image, health, and eating disorders; food and individual, community and cultural identity; class, ethnic, and gender based food patterns; modern food production patterns, inequality and the environment; social food movements and social justice. Equates with SOC 337, CRIM 337 and SWK 337.

Course Overview

This is a sociological course focusing on the sociology of food. Food is essential to human life, and therefore, is a central part of social life. It is a powerful carrier of cultural, social, and personal meaning. This course will study food as a cultural phenomenon examining variations in cultural norms and values regarding food, and exploring the ways in which food establishes cultural and ethnic boundaries. Topics will include: The ways in which food defines our identity and our ties to family and community; Class, ethnic, cultural and gender differences in food patterns; Hunger and food insecurity; The social construction of ideal bodies and the development of eating disorders; Children and food; The reorganization and McDonaldization of the food industry through fast food including an analysis of the ecology and morality of this industry; Agribusiness and its relationship to global inequality and environmental destruction; World hunger and the organization of the global food system; and The future of food examining recent developments that have arisen in response to the problems of the current global food system including organic agriculture, farmers' markets and fair trade.

Intended Student Learning Outcomes:.

The purpose of this course for students to

- Gain a deeper understanding of the role of food in defining our identity and our ties to family and community. This outcome will be measured using exams, writing assignments and reflections and the food journal as detailed in the chart below.
- Gain a deeper understanding of class, ethnic, cultural, and gender related food patterns. This outcome will be measured using exams, writing assignments and reflections and the food journal as detailed in the chart below.
- Gain a deeper understanding of the ways in which the food systems create and maintain inequality at the local, national, and global levels and explore the role of the political and legal institutions in regulating food policies. This outcome will be measured using exams, writing assignments and reflections, and written paper or project as detailed in the chart below.
- Explore the ways in which the production, processing, and consumption of food have changed over time and examine the future of food especially as it relates to corporate agriculture and global inequality. Examine avenues for social change. This outcome will be measured using

exams, writing assignments and reflections, and written paper or project as detailed in the chart below.

Cross-listing with Sociology/Social Work/Criminology:

Sociology: This course will further expand students' understanding of the sociological imagination, social inequality, social problems and social justice as they relate to the sociology of food. The students will become more familiar with concepts and the methods of research used in social science scholarship. This course will contribute to the Sociology program's focus on social inequality and social justice.

Social Work: This course will examine the ways in which food creates individual problems related to eating disorders and food related health problems. It will explore social problems related to poverty and access to food, the school lunch program and other school related food/exercise issues, functional and dysfunctional family patterns related to food, social policies regarding food, and more. Students will become more familiar with concepts and the methods of research used in social science scholarship.

Criminology: Criminology students will further expand their understanding of the sociological imagination, social inequality, social problems and social justice. They will gain competencies in understanding food as it relates to identity and labeling food behaviors and identities as deviant. They will explore legal issues related to food insecurity and inequality as well as legal issues and government regulations related to advertisement of food especially in regard to the advertisement of food to children. We will examine the effects of dysfunctional family forms on food behaviors. We will examine the issue of criminality and white collar crime in terms of a profit driven global food system controlled by corporations like Monsanto, the use of illegal immigrants who are mistreated within the food system, the abuse of animals in the food system, and more. Legal battles with Monsanto and small farmers are explored. Environmental regulations resulting form corporate agriculture are also explored. Students will gain competencies in understanding the ways in which political and legal systems function to regulate the food system. Students will become more familiar with concepts and the methods of research used in social science scholarship.

Gender Studies: Gender Studies students will examine issues related to food and identity, the construction of masculinity and femininity around food, food insecurity, body image and eating disorders, sexism in food advertising, parenting and food, the role of women in food production, exploitation of food workers, and the destruction of the environment through corporate agriculture using the lens of ecofeminism.

Methods of Assessing Learning Outcomes

Course Objectives will be assessed through writing assignments and reflections, exams, a food journal, and a final project. These assignments are described in the section below labeled "requirements" and detailed in the chart below.

Course Objective	Program Competencies related to course objective	Assessment of Course objective	Evaluation of measurement
1. Gain a deeper understanding of the role of food in defining our identity and our ties to family and community.	1. SOC/CRIM Competency 1. A working knowledge of the general concepts of sociological analysis, including exposure to selected substantive areas of sociology. 2. SOC/CRIM competency 4. The ability to understand themselves and their society from a general liberal arts tradition. 3. SWK Competency 2. Engage diversity	This outcome will be measured using exams, and in-class writings and reflections and the food journal. Specifically students will reflect on their experiences of food and how it connects them to family, community and their personal identity. Several readings will analyze the role of food and	Rubrics will be used to evaluate in-class writings and reflections. Tests will include objectives measures.

	and difference in practice. 5. GST Competency 2. To develop students' understanding about the ways in which different cultures socialize members into feminine and masculine roles.	eating in creating identity and community. Exams will ask questions about these readings to ensure that students understand these concepts and ideas. The food journal will ask specific questions about students food habits as they relate to identity and ties to family and community.	Rubric will be used to evaluate food journal.
2. Gain a deeper understanding of class, ethnic, cultural, and gender related food patterns. This outcome will be measured using exams, writing assignments and reflections.	1. SOC/CRIM Competency 1. A working knowledge of the general concepts of sociological analysis, including exposure to selected substantive areas of sociology. 2. SOC/CRIM competency 4. The ability to understand themselves and their society from a general liberal arts tradition. 3. SWK Competency 3. Advance human rights and social, economic and environmental justice. 4. SWK Competency 2. Engage diversity and difference in practice. 5. GST Competency 2. To develop students' understanding about the ways in which different cultures socialize members into feminine and masculine roles.	This outcome will be measured using exams, and in-class writings and reflections and the food journal. Specifically students will write in class reflections responding to readings and films related to these food patterns such as gender differences in food patterns or the presence of hunger and food desserts in our communities. Exams will ask specific questions about material in these readings and films to ensure that students understand these concepts and ideas. The food journal will ask specific questions about students' food habits as they relate to gender identity and socialization.	Rubrics will be used to evaluate in-class writings and reflections. Tests will include objectives measures. Rubric will be used to evaluate food journal.
3. Gain a deeper understanding of the ways in which the food systems create and maintain inequality at the local, national, and global levels and explore the role of the political and legal institutions in regulating food policies.	1. SOC/CRIM Competency 1. A working knowledge of the general concepts of sociological analysis, including exposure to selected substantive areas of sociology. 3. SOC/CRIM Competency 4. The ability to understand themselves and their society from a general liberal arts tradition. 4. CRIM Competency 5. Students will begin to understand the reciprocal relationships between the criminal justice system, criminal justice policies and crime. 5. CRIM Competency 8. Students will develop reading skills, writing abilities and oral communication skills, so that they can apply sociological and criminological principles to criminal justice roles and explanations of criminal behavior and criminal justice system behavior. 6. SWK Competency 3. Advance human rights and social, economic and environmental justice. 7. GST Competency 1. To challenge students to use a variety of critical thinking and problem solving skills to recognize and contend with gender inequality at the individual and social level.	This outcome will be measured using exams, and in-class writings and reflections and the final course project. Specifically students will write in class reflections responding to readings and films related to the industrialization of agriculture, the development of a for-profit food system, the criminal behavior of individuals and corporations in this system, and the resulting inequalities. Exams will ask specific questions about material in these readings and films to ensure that students understand these concepts and ideas. The final paper/project will assess students ability to use writing and communication skills to illustrate their understanding of food systems and inequality.	Rubrics will be used to evaluate in-class writings and reflections. Tests will include objectives measures. Rubric will be used to evaluate the final paper/project .
4. Explore the ways in which the production, processing, and consumption of	1. SOC/CRIM Competency 1. A working knowledge of the general concepts of sociological analysis, including exposure to selected substantive areas of sociology.	This outcome will be measured using exams, and in-class writings and reflections and the final course project. Specifically students will write in class	Rubrics will be used to evaluate in-class writings and

food have changed over time and examine the future of food especially as it relates to corporate agriculture and global inequality. Examine avenues for social change. This outcome will be measured using exams, writing assignments and reflections, and written paper or project.	2. SOC/CRIM Competency 4. The ability to understand themselves and their society from a general liberal arts tradition. 3. SWK Competency 3. Advance human rights and social, economic and environmental justice. 4. GST Competency 1. To challenge students to use a variety of critical thinking and problem solving skills to recognize and contend with gender inequality at the individual and social level.	reflections responding to readings and films related to the global food system and the future of food. Exams will ask specific questions about material in these readings and films to ensure that students understand these concepts and ideas. The final paper/project will assess students ability to use writing and communication skills to illustrate their understanding of global food systems and the future of food.	reflections. Tests will include objectives measures. Rubric will be used to evaluate the final paper/project

REQUIRED READINGS

1. *Food A Reader For Writers by Deborah H. Holdstein and Danielle Aquiline*
- *Publisher: Oxford University Press; 1 edition (December 8, 2014)*
- *ISBN-10: 0199385688*
- *ISBN-13: 978-0199385683*

2. *In Defense of Food by Michael Pollan*
- *Publisher: Penguin Books; 1 edition (April 28, 2009)*
- *ISBN-10: 0143114964*
- *ISBN-13: 978-0143114963*

3. Additional Readings will be posted on Blackboard and announced in class.

4. On occasion you may be required to watch a film on amazon or another site for a small fee

COURSE REQUIREMENTS

◊ **Class Participation (required – will determine borderline grades).**
- o Class participation consists of responding to comments, asking and answering questions, volunteering information, suggesting new aspects and topics, generally taking an active part in discussions, and being attentive and engaged when others are talking.
- o Some people do not feel comfortable sharing verbally but I encourage everyone to participate when possible. If you do not feel comfortable saying much in class then be sure to be attentive and visually engaged.
- o If you are texting or otherwise engaged with your phone then this will be considered as a lack of participation.
- o Participation should be appropriate in quantity and nature. It should not stifle other students or dominate the classroom. For those of you who feel more comfortable speaking out be careful that other students do not rely on you to carry the discussion.
- o All comments must respect all human beings. Sexist, racist, homophobic, ageist, xenophobic, ableist, body size comments or statements that degrade a person or group's belief systems are not appropriate.

◊ **Attendance and In-Class Writings and reflections (20 points or 5% of course grade)**
Throughout the semester you will be asked to respond to films, participate in group exercises, or reflect on ideas or issues. These assignments will be used to measure the course objectives and also as a measure of attendance so make sure you always hand in your assignment to get credit for attendance.

- **Excused vs Unexcused absence** - For your first two missed classes, I do not keep track of excused versus unexcused absences. I assume that on occasion students will need to miss class for illness, oversleeping or any number of reasons. You are an adult and you get to decide whether or not to come to class. However, there are policies regarding attendance (see below) that you may want to consider because they may affect your grade. Generally, even if you are sick or have things come up you can easily get through the semester missing only a few classes. Almost everyone will be able to earn an A or B on the attendance score even if you stay home when you are sick (which I highly recommend). If you have extenuating circumstances that require you to miss more than two classes, and these circumstances fall within the university's guidelines for excused absences, and you have documentation, then we will make arrangements for you to make up the missed work. If you have university excused absences for sports or other obligations then it is your responsibility to inform me of those excused absences.

- **Extenuating Circumstances** - If you have a serious illness or other extenuating circumstances then please see me so that we can make alternate arrangements. I do not want anyone to have to drop the class because of situations outside of your control. While I am unable to give you credit for attending class when you were not there, we can make alternate arrangements in extreme situations.

- **Attendance Policy summarized**
  - ✓ **0,1 or 2 absences - no penalty.** You will be able to miss two classes, regardless of the reason, and still earn enough points to reach 100% on the attendance score.
  - ✓ **3 to 6 absences - one point penalty per absence.** After two absences, one point will be deducted from the total 20 points allotted for attendance score for each additional absence. For example, your third absence results in a score of 19/20, fourth absence = 18/20, etc. Once you exceed 6 absences there are additional penalties.
  - ✓ **7 to 8 absences – final grade penalty**. Any student who has 7 or 8 absences without making special arrangements, will not earn a score higher than C for the course.
  - ✓ **9 to 10 absences – final grade penalty**. Any student who has 9 or 10 absences without making special arrangements, will not earn a score higher than D for the course.
  - ✓ **11 or more absences – fail course**. Any student who has 11 or more absences without making special arrangements, will not earn a passing score for the course.

◊ **Reading Check Assignments (30 points or 7.5% of course grade)**

- Readings should be completed before the class session for which they are assigned.
- There will be short answer quizzes covering the scheduled readings for class days OR you will be required to answer specific reading questions at home and turn those in during class.
- If you are not in class to turn in or participate in the reading check then you will miss these points.
- One reading check score will be dropped.

- **Make-up Assignments** - If you miss more than one reading check and you would like to turn in make-up work then you may do so within one week of the reading check. To make up the reading check you must write a 700 word summary of and reaction to the reading required for that week. You must make up the assignment within one week of the due date. You are allowed to turn in up to two reading check make- up assignments. After two make up assignments (in addition to the one dropped score), you must make special arrangements to make up additional assignments. If you are in this situation then you should make an appointment to meet with me.

◊ **Exams (75% - 300 points total or 100 points per exam)**

There will be three exams (25% each) consisting of multiple choice and essay questions. The exams primarily cover the material for only one section of the course, especially in regard to details. However, the exams are cumulative in that the major ideas of the course are maintained throughout the semester. These exams will require that you reflect on, synthesize, analyze, and critique the material covered during that section of the course. The third exam will draw on ideas from the entire semester.

◊ **Food Journal (5% - 20 points)**

Students will record a three-day food journal documenting personal eating habits and experiences on a daily basis. In your description of each meal or snack, record the following:

- What did you eat?
- Was the food a whole food or processed?
- Where did you eat?
- With whom did you eat?
- What did it cost?
- What was the quality of the food?
- How much time did you spend eating the meal or snack?
- Did you experience any emotion in relation to your meal or snack such as enjoyment, pleasure, sense of being rushed, regret, guilt, etc.
- Why did you make the choices that you did in relation to this snack or meal?

At the end of the journal, analyze your consumption patterns. What do you like about the patterns? What would you like to change about the patterns and why? What did you learn from this exercise?

◊ **Position Paper or Presentation (7.5% - 30 points).**

- PAPER: Papers must be completed alone and not with other students. Choose a question of interest to you that is related to a specific food topic and then find academic research that helps you to answer that question. Your position paper will do the following:
  - Describe a debatable issue and explain the debate. (introduction)
  - State clearly the position that you are taking. (introduction)
  - Briefly describe the most substantial objections to your view and refute them. (main body).
  - Outline the research based evidence in support of your position. (main body).
  - Summarize the reasons for your position (conclusions).
  - Document your sources. You must use at least three academic sources including at least one journal article or academic book. The other two sources may include credible websites (not commercial websites or corporate backed websites).
  - This paper should be 7-8 pages.
  - Crim students should choose a topic relevant to criminology
  - Social work students should choose a topic relevant to social work.
  - Gender Studies students should choose a topic relevant to gender studies.

Your paper should NOT

- Offer your opinion without fact and research to back it up.
- Take both sides on the issue.
- Completely ignore literature that conflicts with your position.

- PRESENTATION: In lieu of the paper you alone or with one or two other students, may choose a topic and present information about that topic. In this case you do not need to turn in a paper but you DO NEED to use scientific evidence to support your claims including three academic sources, one of which must be a refereed journal or academic book. The other two sources may include credible websites (not commercial websites or corporate backed websites). You must have visuals to accompany the presentation – images, short video clips, power point slides, etc. You must turn in an electronic copy of the presentation visuals including your sources. The information presented should be comprehensive enough to be comparable to a 7 to 8 page paper. Criminology students, social work , and gender studies students should choose topics relevant to your discipline.

EXTRA CREDIT – You are allowed to earn up to fifteen points of extra credit. See the extra credit tab on bb for details. All extra credit is due Friday night at midnight on the last week of class, no exceptions.

Grading Distribution Scale
A=360 – 400 points (90-100%)
B=320 – 359 points (80-89%)
C=280 – 319 points (70-79%)
D=240 – 279 points (60-69%)
E=0-239 points (<60%)

Campus Safety Statement Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

Academic honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA) Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 ADUC coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

Detailed Outline of Schedule and Readings
Blackboard will be used to organize the course on a weekly basis. Every week of the semester will have a folder on blackboard that details what readings are required, what films were shown in class, and what assignments are due. Each section is posted several weeks ahead of schedule but occasionally we will get

off schedule and this is reflected on bb. Be sure that you use bb for announcements and weekly guide information. If you do not keep up with bb then you will be lost in this course.

GENERAL SECTION OUTLINE – THREE MAJOR SECTIONS

NOTE: Each week of the semester has its own folder on bb. In that folder you will find your reading assignment for each day, the names of film clips and websites that we will be covering in class, and any additional relevant information. It is essential that you keep up with blackboard to get detailed information about readings and assignments.

SECTION ONE – Weeks 1 – 6
This folder contains a weekly guide for what we are covering in class during section one of the course. The readings, assignments, films, and any other information that you need for this section of the course will be posted in this file. This section of the course deals with Food, Self and Identity as well as Food and the body.

FOOD SELF AND IDENTITY

- Food, family, and community – how does food structure our relationships?
- Food, ethnicity and culture – ethnic and cultural differences in food rituals, norms and behaviors; how does food define our culture and connect us to our
- cultural groups?
- Illegal harvesting of palm oil globally for food and other products worldwide.
- Food and deviance – How are food rituals defined as deviant or normative? What is the process by which some food patterns like vegetarians become
- labeled as deviant with what consequences?
- Food and class – are there class differences in food behaviors and patterns? What are the ramifications and consequences of these differences in terms of
- access to food, freedom of food choice, power and control over food, and health issues? What is food insecurity and how much of a social problem is it?
- Food and gender – in what ways are food norms and behaviors gendered. What are the consequences of these gender differences?
- Food and self – how do you define yourself by what you eat? How do your food-related behaviors influence how other people perceive you?

FOOD AND THE BODY

- Cultural expectations for the body and cultural control of the body.
- Gender differences in cultural control of the body.
- Eating disorders – anorexia, bulimia, binge eating, over eating.
- Obesity as a social issue as well as an individual issue. Obesity, stigmatization, deviance and inequality.

SECTION TWO – Weeks 7-10
This folder contains a weekly guide for what we are covering in class during section two of the course. The readings, assignments, films, and any other information that you need for this section of the course will be posted in this file. This section of the course deals with food as it relates to our health, food and children, and the ethics of our food system in terms of workers and animals.

FOOD AND CHILDREN

- Advertising food to children. What are the laws regarding advertising to children vs adults? What government agencies regulate this advertising?
- Effects of Parenting on eating patterns in children.
- How do dysfunctional family patterns affect eating habits?
- How do disciplinary practices effect eating habits?
- Lifelong effects of childhood eating patterns
- School lunch programs and government interventions in child health

- Exploitation of child labor in agriculture – legal requirements regarding child labor in general vs agriculture.
-

FOOD AND HEALTH

- Fast food
- King Corn
- GMO, pesticides, and herbicides.
- Is our food system safe?
- White collar crime and the food industry
- What is a "Balanced Diet"
- Is it true that you are what you eat?

SECTION THREE – Weeks 11-16

HISTORY OF FOOD PRODUCTION

- Changes in the cultivation of food over time
- Development of agriculture – distancing ourselves from food production.
- Development of corporate agriculture – role of government subsidies.
- The role of Monsanto in the food revolution. Government regulation of the food industry. Monsanto and the court system.
- White-collar crime in corporate agriculture. Links between corporate agriculture and government policy.

FOOD AND ETHICAL CONSIDERATIONS

- Treatment of workers in the food industry – white collar crime in the treatment of workers. Changes in laws and policies and rights of workers. Decline
- of labor unions. Criminal cases involving violation of labor laws.
- Immigrant labor in agriculture – legal and economic issues
- Treatment of animals in the food industry. What constitutes criminality in the treatment of pets vs farm animals? Prosecution of hog farmers for animal
- abuse.
- Growing and hunting food. Why is hunting considered a norm violation by many people while eating abused animals is normative.
- Treatment of the environment in global agriculture – violation of environmental laws and regulations in the food industry.
- Food waste – what are regulations on food waste? What is the impact on the environment?

GLOBAL ISSUES AND FOOD

- Loss of Biodiversity
- Loss of economic livelihood and autonomy as a result of global economy
- Global inequality and food acquisition

FUTURE OF FOOD

- Feeding the World
- Organic Farming
- Farmers Markets
- The Natural Food Movement

Please insert (paste) any supporting documentation (email correspondence, IACUC form, etc.) here and remove this statement.

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	GST 355 Sociology of the Body
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

(✓) Approved ( ) Disapproved 11-12-19

Department Chair or Associate Dean (Sign and Print) — Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11-19-19

College Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved 11-21-19

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Conch Laurie Conch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GST 355
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If an Information Technology signature is required, it has been obtained.	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The course title, department, and college names correspond to the current catalog.	☑
☑	Course teaching workload, formula, and semesters taught are specified.	☑
☑	The course description EXACTLY matches the course description stated in the syllabus.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☑	Responses are complete and applicable for each question.	☑
☑	If the course requires the use of live animals, the IACUC form is attached.	☑
☑	The syllabus starts on a separate page.	☑
☑	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☑
☑	The syllabus contains the course title and course number (exactly as listed in the proposal).	☑
☑	The syllabus contains the academic term with date.	☑
☑	The syllabus contains the instructor's name.	☑
☑	The syllabus contains the office location.	☑

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Constance Hardesty 11/12/19

Originator (Sign and Print) Approval Date

Scott Davison 11-12-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ **New Course** ☐ **Revised Course**

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)						
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	GST	355	Sociology of the Body	3-0-3	3	Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

This is a ☐ **required course. This is an** ☒ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

GST-355 Sociology of the Body (3 Credits)

An introduction to the sociological study of the body. Students explore the multifaceted interplay between culture, groups, identity, the Self, and the body. The social and cultural construction of bodies related to inequality based on race, class, gender, sexuality, disability and other dimensions are examined. Equated with SOC 355, SWK 355, and CRIM 355.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

This is a new course for GST. However, it currently exists as a SOC/SWK/CRIM course. We are proposing it as a new GST course so that it will be equated with GST

B. Justify the proposed instructional level (100-600) or instructional level change.

The readings and assignments for this course are at an upper division level. It requires that students have achieved upper division level skills for reading, writing, analyzing, and critically thinking.

C. List the student learning outcomes for the course.

The purpose of this course for students is to:

- Gain a deeper understanding of the way in which one's experiences of the world, from birth to death, are all mediated by the physical body. Examine the ways that culture influences one's presentation of the body, one's attitudes toward the body, and one's sense of being at home in one's body.
- Analyze the complex interplay between culture, groups, identity, the Self, and the body and evaluate the ways in which power, dominance, and inequality affect the body especially as they relate to race, class, gender, age, ethnicity, sexual orientation, ability, language, and religion. Explore how bodies can be a site of both oppression and empowerment.
- Examine what it means to have a strong, healthy, mindful connection to one's own body and how being at home in one's own

body enables us to have healthier connections to community and to work for positive social change. .

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

Students will complete exams, written assignments and reflections, a body change assignment and a final paper/projects scored by rubrics. Specifically, for outcome 1, students will reflect on their experiences of their body and how these experiences are influenced by cultural norms and values. Readings and films will analyze the relationship between social forces and the experience of the body. Exams will ask questions about these readings to ensure that students understand these concepts and ideas. The body change assignment will ask specific questions about students experience of the body within culture. Specifically for outcome 2, students will write in class reflections responding to readings and films related to the body and social inequality. Exams will ask specific questions about material in these readings and films to ensure that students understand these concepts and ideas. The body change assignment will ask specific questions about students' experience of the body and inequality as it relates to issues of race, class, gender, age, etc. The final course project/paper will deal with issues related the body and culture assessing student's ability to understand this connection. Specifically for outcome 3, students will write in-class reflections responding to readings and films related body image and control of the body and many other issues related to one's ability to be at home in the body. The final paper/project will assess students' ability to use writing and communication skills to illustrate their understanding of the connections between the body and community and social change. Likewise, the body change assignment will ask students to explore their feelings of being at home in their body and how this relates to their overall well being and connection to community. Exams will use objective measures and rubrics will be used to assess the body change assignment, in-class writings and reflections, and the final paper/project.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

This course will help students to achieve learning objectives for the program as follows:
1. To challenge students to use a variety of critical thinking and problem solving skills to recognize and contend with gender dynamics and inequality at the individual and social levels. The course examines gender inequality in relation to the body including sizism, racism, sexism, agism and other forms of inequality.
2. To develop students' understanding about the ways in which different cultures socialize members into gendered roles. The course explores the ways in which we experience the world through our bodies and this is affected by cultural constructions of gender.
3. To expand students' knowledge, skills, and consciousness regarding their choices with regard to institutionalized societal structures such as family, healthcare, education, political systems, work, and leisure. Students are made aware of the ways in which their experiences of social institutions is affected by their bodies in terms of their race, gender, age, sexual orientation, etc.
4. To inform students of the diversity and impact of contributions from individuals of various identities throughout history and across academic disciplines in a multicultural and global society. The course explores gender and the body from a global perspective and uses diverse scholarship.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

- Educate Students for success in a global environment;

This course examines cross-cultural variations in norms, values, and cultural practices regarding the body. Understanding global cultural diversity as it relates to the body will help to educate students for success in a global environment.

- Engage in scholarship;

Students will read scholarly works in the area of body studies and will write papers focusing on the interplay between culture, groups, identity, the Self, and the body.

- Promote diversity of people and ideas;

Diversity is central to the mission of the course. The readings will focus on the ways in which bodies are culturally constructed based on race, class, gender, ethnicity, age, disability, sexuality, religion, and other dimensions. It will explore the ways in which the body is a site for oppression as well as empowerment for diverse groups.

- Foster innovation, collaboration and creative thinking;

Students will be required to engage in critical thinking as they explore issues related to body studies. The assignments require both collaboration (working in groups) and creative thinking as they apply the course material to their own life, developing a deeper realization of and respect for one's own bodily experience.

- Serve our communities to improve the quality of life.

Students will examine avenues for social change in terms of social inequality and the body. For example, the course will explore how the ideas of physical ability and disability are socially constructed and how these constructions lead to inequality. Understanding inequality as it relates to the body will better equip students to serve our communities and improve the quality of life.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.
none

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.
This course will be equated with SOC/SWK/CRIM 355 Sociology of the Body

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Sociology

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)
Dr. Dianna Murphy

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.
Dr. Constance Hardesty PhD
Dr. Bernadette Barton PhD
Dr. Ned Breschel PhD

B. Identify external adjunct faculty, if appropriate.

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.
35/35 Some of these students will be enrolled under the SOC/SWK/CRIM prefix and about 5 under the GST prefix

B. Desired implementation date for the course.
Spring 2021

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
Class discussion, small group discussions and exercises, lecture

D. Additional facilities and special equipment needs for this course, if any.
none

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
Caudill College of Arts, Humanities and Social Sciences
School of Humanities and Social Sciences
Department of Sociology, Social Work and Criminology

SOC/SWK/CRIM/GST 355 Sociology of the Body
SPRING 2020

Instructor and Contact Information:

Dr. Constance Hardesty
327 Rader Hall 783-2202
c.hardes@morehead-st.edu
Office Hours: T Th 10:00-11:00; 315-500 and anytime by appointment.

Catalog Course Description

An introduction to the sociological study of the body. Students explore the multifaceted interplay between culture, groups, identity, the Self, and the body. The social and cultural construction of bodies related to inequality based on race, class, gender, sexuality, disability and other dimensions are examined.

Intended Student Learning Outcomes:

The purpose of this course for students is to:

- Gain a deeper understanding of the way in which one's experiences of the world, from birth to death, are all mediated by the physical body. Examine the ways that culture influences one's presentation of the body, one's attitudes toward the body, and one's sense of being at home in one's body.
- Analyze the complex interplay between culture, groups, identity, the Self, and the body and evaluate the ways in which power, dominance, and inequality affect the body especially as they relate to race, class, gender, age, ethnicity, sexual orientation, ability, language, and religion. Explore how bodies can be a site of both oppression and empowerment.
- Examine what it means to have a strong, healthy, mindful connection to one's own body and how being at home in one's own body enables us to have healthier connections to community and to work for positive social change. .

Course Objective	Program Competencies related to course objective	Assessment of Course objective	Evaluation of measurement
1. Gain a deeper understanding of the way in which one's experiences of the world, from birth to death, are all mediated by the physical body. Examine the ways that culture influences one's presentation of	1. SOC/CRIM Competency 1. A working knowledge of the general concepts of sociological analysis, including exposure to selected substantive areas of sociology. 2. SOC/CRIM competency 4. The ability to understand themselves and their society from a general liberal arts tradition. 3. SWK Competency 2. Engage diversity and difference in practice. 4. GST Competency 2. To develop students' understanding about the ways in which	This outcome will be measured using exams, and in-class writings and reflections and the body change assignment. Specifically students will reflect on their experiences of their body and how these experiences are influenced by cultural norms and values. Readings and films will analyze the relationship between social forces and the experience of the body. Exams will ask questions	Rubrics will be used to evaluate in-class writings and reflections. Tests will include objectives measures. Rubric will be used to evaluate body change assignment.

the body, one's attitudes toward the body, and one's sense of being at home in one's body.	different cultures socialize members into feminine and masculine roles. 5. GST Competency 2 To challenge students to use a variety of critical thinking and problem solving skills to recognize and contend with gender dynamics and inequality at the individual and social levels.	about these readings to ensure that students understand these concepts and ideas. The body change assignment will ask specific questions about students experience of the body within culture.	
2. Analyze the complex interplay between culture, groups, identity, the Self, and the body and evaluate the ways in which power, dominance, and inequality affect the body especially as they relate to race, class, gender, age, ethnicity, sexual orientation, ability, language, and religion. Explore how bodies can be a site of both oppression and empowerment	1. SOC/CRIM Competency 1. A working knowledge of the general concepts of sociological analysis, including exposure to selected substantive areas of sociology. 2. SOC/CRIM competency 4. The ability to understand themselves and their society from a general liberal arts tradition. 3. SWK Competency 3. Advance human rights and social, economic and environmental justice. 4. SWK Competency 2. Engage diversity and difference in practice. 5. GST Competency 2. To develop students' understanding about the ways in which different cultures socialize members into feminine and masculine roles. 6. GST Competency 2 To challenge students to use a variety of critical thinking and problem solving skills to recognize and contend with gender dynamics and inequality at the individual and social levels.	This outcome will be measured using exams, and in-class writings and reflections and the body change assignment. Specifically students will write in class reflections responding to readings and films related to the body and social inequality. Exams will ask specific questions about material in these readings and films to ensure that students understand these concepts and ideas. The body change assignment will ask specific questions about students' experience of the body and inequality as it relates to issues of race, class, gender, age, etc. The final course project/paper will deal with issues related the body and culture assessing student's ability to understand this connection.	Rubrics will be used to evaluate in-class writings and reflections. Tests will include objectives measures. Rubric will be used to evaluate body change assignment. The final paper/project will be assessed using a rubric.

3. Examine what it means to have a strong, healthy, mindful connection to one's own body and how being at home in one's own body enables us to have healthier connections to community and to work for positive social change.	1. SOC/CRIM Competency 1. A working knowledge of the general concepts of sociological analysis, including exposure to selected substantive areas of sociology. 2. SOC/CRIM Competency 4. The ability to understand themselves and their society from a general liberal arts tradition. 3. GST Competency 1. To challenge students to use a variety of critical thinking and problem solving skills to recognize and contend with gender inequality at the individual and social level.	This outcome will be measured in-class writings and reflections and the body change assignment and the final paper/project. Specifically students will write in-class reflections responding to readings and films related body image and control of the body and many other issues related to one's ability to be at home in the body. The final paper/project will assess students' ability to use writing and communication skills to illustrate their understanding of the connections between the body and community and social change. Likewise, the body change assignment will ask students to explore their feelings of being at home in their body and how this relates to their overall well being and connection to community.	Rubrics will be used to evaluate in-class writings and reflections as well as the body change assignment and final project/paper.

Required Readings

DeMello, Margo (2014). *Body Studies: An Introduction.* Routledge. ISBN 978-0415699303

Additional Readings will be posted on Blackboard.

Blackboard, Announcements and Communication

I use Blackboard extensively in this class. Each week of class has its own folder on bb under weekly guide. You must keep up with these folders. They will list the required readings and any other assignments for that week. If you miss class then you can go to the folder to see what you missed. Any changes to the assignments or schedule will be listed under weekly guide.

Course Requirements

- **Class Participation (required – will determine borderline grades).**
  - Class participation consists of responding to comments, asking and answering questions, volunteering information, suggesting new aspects and topics, generally

taking an active part in discussions, and being attentive and engaged when others are talking.
- Some people do not feel comfortable sharing verbally but I encourage everyone to participate when possible. If you do not feel comfortable saying much in class then be sure to be attentive and visually engaged.
- If you are texting or otherwise engaged with your phone then this will be considered as a lack of participation.
- Participation should be appropriate in quantity and nature. It should not stifle other students or dominate the classroom. For those of you who feel more comfortable speaking out be careful that other students do not rely on you to carry the discussion.
- All comments must respect all human beings. Sexist, racist, homophobic, ageist, xenophobic, sizist comments or statements that degrade a person or group's spiritual/religious beliefs or absence of beliefs, are not appropriate.

◊ **Attendance and In-Class Writings (20 points or 5% of course grade)**
Throughout the semester you will be asked to respond to films, participate in group exercises, or reflect on ideas or issues. These assignments will be used as a measure of attendance so make sure you always hand in your assignment to get credit for attendance.

- **Excused vs Unexcused absence** - For the most part, I do not keep track of excused versus unexcused absences. I assume that on occasion students will need to miss class for illness, oversleeping or any number of reasons. You are an adult and you get to decide whether or not to come to class. However, there are policies regarding attendance (see below) that you may want to consider because they may affect your grade. Generally, even if you are sick or have things come up you can easily get through the semester missing only a few classes. Almost everyone will be able to earn an A or B on the attendance score even if you stay home when you are sick (which I highly recommend). If you have extenuating circumstances that require you to miss more then we will make arrangements.

- **Extenuating Circumstances** - If you have a serious illness or other extenuating circumstances then please see me so that we can make alternate arrangements. I do not want anyone to have to drop the class because of situations outside of your control. While I am unable to give you credit for attending class when you were not there, we can make alternate arrangements in extreme situations. For example, if you are pregnant and your baby is born before the end of the semester then we will work things out.

- **Attendance Policy summarized**
  - ✓ **0,1 or 2 absences - no penalty.** You will be able to miss two classes, regardless of the reason, and still earn enough points to reach 100% on the attendance score.
  - ✓ **3 to 6 absences - two point penalty per absence.** After two absences, two points will be deducted from the total 20 points allotted for attendance score for each additional absence. For example, your third absence results in a score of 18/20, fourth absence = 16/20, etc. Once you exceed 6 absences there are additional penalties.
  - ✓ **7 to 8 absences – final grade penalty**. Any student who has 7 or 8 absences without making special arrangements, will not earn a score higher than C for the course.
  - ✓ **9 to 10 absences – final grade penalty**. Any student who has 9 or 10 absences without making special arrangements, will not earn a score higher than D for the course.
  - ✓ **11 or more absences – fail course**. Any student who has 11 or more absences without making special arrangements, will not earn a passing score for the course.

◊ **Reading Check Assignments (40 points or 10% of course grade)**

- Readings should be completed before the class session for which they are assigned.
- There will be short answer quizzes covering the scheduled readings for class days OR you will be required to answer specific reading questions at home and turn those in during class.
- If you are not in class to turn in or participate in the reading check then you will miss these points.
- One reading check score will be dropped.
- **Make-up Assignments** - If you miss more than one reading check and you would like to turn in make-up work then you may do so within one week of the reading check. To make up the reading check you must write a 700 word summary of and reaction to the reading required for that week. You must make up the assignment within one week of the due date. You are allowed to turn in up to three reading check make- up assignments. After three make up assignments (in addition to the one dropped score), you must make special arrangements to make up additional assignments. If you are in this situation then you should make an appointment to meet with me.
- **University Excused Absences –** If you miss class for a University Excused Absence (athletics, field trips, etc) then you need to write a 700 word summary of and reaction to the reading as a quiz make-up. Points are not deducted from attendance scores for University Excused Absences.

◊ **Body Change Assignment (20 points or 5% of final course grade)**

This assignment will require that you change something about your body and reflect on how this change or series of change influences how you feel physically, how you feel emotionally, how you think about yourself, and how others respond to you. This change may involve a major change such as gaining or losing weight, an new exercise regimen, significantly changing your diet such as giving up sugar, not shaving your legs if you are female or shaving your legs if you are a male for the entire semester. The change might also involve a series of minor changes – trying a series of different hairstyles over the course of the semester, making a series of changes in dressing or grooming behaviors over the semester, etc. Regardless of your choice, this body change exercise requires that you reflect on your experience of your own body, people's reactions to your body, your own reactions to your body, and the ways in which the body mediates your experience of the world. These options require reflection over the course of the semester. Your grade on this assignment is based less on what you choose to change and more on how you analyze your reaction to this change and other people's reaction to you within a cultural context.

◊ **Project/Presentation/Social Action Project 20 points or 5% of final course grade).**

Students will be required to work alone or in pairs on a 1500 word paper (about 6 -7 pages double spaced) or a 6-8 minute presentation with power point or some other visual aid that covers an interesting topic related to sociology of the body. BE CREATIVE! Topics will be provided or you may choose your own. In lieu of the paper/presentation, students may work alone or in pairs on a social action project that raises awareness about a body related issue. For example, you might develop a workshop for your dorm or sorority that deals with body image or issues related to gender identity. You could set up a table in ADUC (with permission) that provides information about sexual assault. You must present to the class information about your social action project. Feel free to develop your own ideas but you must have the topic approved ahead of time. This paper/presentation/ project requirement will be discussed in class and detailed on blackboard.

◊ **Exams (300 points for a total of 75% of the course grade)**

There will be three exams (100 points each or 25% of course grade) consisting of multiple choice and essay questions. The exams primarily cover the material for only one section of the course, especially in regard to details. However, the exams are cumulative in that the

major ideas of the course are maintained throughout the semester. These exams will require that you reflect on, synthesize, analyze, and critique the material covered during that section of the course.

Grading Distribution Scale

A=360-400 points
B=320-359 points
C=280-319 points
D=240-279 points
E= 0-239 points

Course Attendance Policy

Attendance is necessary to be successful in the course. Through class discussion, group work, lectures, films and other formats, learning takes place in a classroom setting that goes beyond the reading, assignments and exams. Some of the learning that takes place in the classroom cannot even be tested on an exam. Therefore, I expect you to be present for this learning. I understand that it is necessary to miss class occasionally therefore you are not required to contact me if you are going to miss class once or twice due to mild illness. If you have a situation that requires you to miss class more often it is critical that you set up a time to talk with me about the situation. If you miss a significant number of classes there are penalties to your grade. Details of the attendance policy are outlined above under the attendance course requirement description.

Campus Safety Statement:

Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

Academic Honesty Policy:

All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA):

Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

SPRING 2020 Sociology of the Body Tentative Schedule

Dates, Readings, and Topics are subject to change. Changes will be announced in class and/or on bb. All chapter readings refer to the text book, *Body Studies,* by Margo DeMello.

Week	***Topic***	***Reading***

1.	Intro to the Course:	----------
2.	Theorizing the Body inscribing social order onto the body and counter inscription	Chapter 1
3.	Healthy and Diseased Bodies Social Construction of illness Disabiltiy and the normative body Freaks Monsters and Freak shows	Chapter 2
4.	Aging Bodies The culture of youth, Age norms, Problems of the elderly Aging prison population	Chapter 3
5.	Reproducing Bodies Contraception, abortion and reproductive Rights; Population control, race, and loss Choice; Pregnancy, childbirth and lactation	Chapter 4

EXAM 1

6.	Racialized Bodies What is race? The display and Eroticization of racialized bodies Animalization of non-white bodies	Chapter 6
7.	Gendered Bodies Social construction of gender Circumcision and clitoridectomy Hair matters; Transgender bodies	Chapter 7
8.	Sexualized Bodies Intersexuality; Transexuality; Diversity of sexualities Body play, bondage and fetishes	Chapter 8
9.	Classed Bodies How does class shape the body Dirty jobs and clean jobs Sumptuary laws Invisibility of poor bodies	Chapter 9
10.	**SPRING BREAK**	
11.	Beautiful Bodies The science of beauty Beauty pays; Racialized and classed Standards of beauty Cosmetic surgery	Chapter 10

EXAM 2

12. Fat and Thin Bodies Chapter 11
Questioning the notion of "obesity epidemic"
Eating disorders; Weight prejudice;
Sweetening of the world's food

13. Modified Bodies Bodies Chapter 12
modification in traditional societies;
modification in states to control slaves
and criminals; tattooing, gender, and sexuality;
Modern primitives and non-mainstream
Modificaitons; Subversive bodies.

14. Tortured Punished Convict Bodies Chapter 14
Marking deviance – branding, castration,
And tattooing; Torture, rape and other forms
Of corporal punishment; capital punishment;
The rise of prisons and confining criminals;
Marks of deviance identifying criminals

15. Commodified Bodies Chapter 15
Slavery and ownership of people
Prostitution, sex trafficking and sex tourism
Mail order brides; pornographic bodies;
Selling body parts

16. Class Presentations

EXAM 3 Final Exam Week

Please insert (paste) any supporting documentation (email correspondence, IACUC form, etc.) here and remove this statement.

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	GST 397 (to 300) SOCIAL STRATIFICATION
Department (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures ***(Signatures must be handwritten; electronic signatures are not accepted.)***

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 11-12-19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11-19-19

College Curriculum Committee (Sign and Print) Date

[signature] (✓) Approved ( ) Disapproved 11-21-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12-18-19

Undergraduate Curriculum Committee (Sign and Print) Date

[signature] (✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GST 397
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

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The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The course title, department, and college names correspond to the current catalog.	☑
☑	Course teaching workload, formula, and semesters taught are specified.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Constance Hardesty 11/5/19

Originator (Sign and Print) Approval Date

Scott Davison 11-5-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course

Use this outline to report a minor modification of a previously approved course and to equate a *current* course with a new course. Minor revisions include title, prefix, course number, catalog course description, and admission requirements (test scores, pre-requisites, or co-requisites). ***Minor changes do not modify course content or the course formula.*** If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

I. COURSE

Current Course Name: (as listed in the current catalog)	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Faculty Load**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	GST	397	Social Stratification	3	3-0-3	fall/spring
Proposed Course Name:	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Faculty Load**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	GST	300	Social Stratification	3	3-0-3	Fall/Spring

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

This course is equated with SOC 300. It is easier to keep track of equated courses if they share the same course number. Therefore, we are requesting to change the number 397 to 300 so that it is the same as its equated course in Sociology.

B. List all other departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

None

C. Explain the potential impact on the other departments and programs.

None

D. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

None

III. ADDITIONAL INFORMATION

A. If this is a change that effects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

GST-300 Social Stratification (3 Credits)
This course explores the nature of social inequality with an in-depth focus on the dimension of social class. Students will examine theories of privilege, oppression and the intersectional nature of inequality. Equates with SOC 300. Prerequisite SOC 101

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	GST 476 SPECIAL PROBLEMS IN ~~WOMENS~~ (GENDER) STUDIES
Department (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 11-12-19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11-19-19

College Curriculum Committee (Sign and Print) Date

(~~✓ Approved~~) ( ) Disapproved 11-21-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch (✓) Approved ( ) Disapproved 12/1/19

Undergraduate Curriculum Committee (Sign and Print) Date

(~~✓ Approved~~) ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GST 476
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☑	The course title, department, and college names correspond to the current catalog.	☐
☑	Course teaching workload, formula, and semesters taught are specified.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☑	Responses are complete and applicable for each question.	☑
☐	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Constance Hardesty 11/5/19

Originator (Sign and Print) Approval Date

11-5-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course

Use this outline to report a minor modification of a previously approved course and to equate a *current* course with a new course. Minor revisions include title, prefix, course number, catalog course description, and admission requirements (test scores, pre-requisites, or co-requisites). ***Minor changes do not modify course content or the course formula.*** If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

I. COURSE

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Faculty Load	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
Current Course Name: (as listed in the current catalog)	GST	476	Special Problems in Women's Studies	3	3-0-3	spring/fall
Proposed Course Name:	GST	476	Special Problems in Gender Studies	3	3-0-3	spring/fall

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

We are changing the title and description to be consistent with the Gender Studies minor. Recently we changed the title and description of the minor from Women's Studies to Gender Studies. However, we did not change the title and description of this course.

B. List all other departments and programs that could be impacted by this proposal. For example, any department or program that:

a. requires the course
b. offers the course as an elective
c. offers a similar course
d. has an equated course
e. has the course listed as a co-requisite or pre-requisite
f. shares staff and/or resources

None

C. Explain the potential impact on the other departments and programs.

None

D. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

None

III. ADDITIONAL INFORMATION

A. If this is a change that effects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

GST-476 Special Problems Gender Studies (3 Credits)
This course is an independent study in gender studies for the undergraduate gender studies minor. Each request for the course will be considered on its own merits in relation to the special needs of the student. May be repeated for credit.

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form
Revised January 2018

Course (as listed in current catalog)	GST 490 ~~Integrative Capstone in Women's Studies~~ Gender Studies Capstone
Department (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Mangelos — (✓) Approved ( ) Disapproved — 11-12-19
Department Chair or Associate Dean (Sign and Print) — Date

Alana Scott Alana Scott — (✓) Approved ( ) Disapproved — 11-19-19
College Curriculum Committee (Sign and Print) — Date

(✓) ~~Approved~~ ( ) Disapproved — 11-21-19
Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch — (✓) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved — 12-16-19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GST 490
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

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Please note: it is the initiator's responsibility to track a proposal through the approval process.

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☑	The course title, department, and college names correspond to the current catalog.	☐
☑	Course teaching workload, formula, and semesters taught are specified.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☑	Responses are complete and applicable for each question.	☐
☑	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Constance Hardesty 11/5/19

Originator (Sign and Print) Approval Date

Scott Dalton 11-5-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course

Use this outline to report a minor modification of a previously approved course and to equate a *current* course with a new course. Minor revisions include title, prefix, course number, catalog course description, and admission requirements (test scores, pre-requisites, or co-requisites). ***Minor changes do not modify course content or the course formula.*** If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

I. COURSE

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Faculty Load	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
Current Course Name: (as listed in the current catalog)	GST	490	Integrative Capstone in Women's Studies	3	3-0-3	spring
Proposed Course Name:	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Faculty Load**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	GST	490	Gender Studies Capstone	3	3-0-3	spring

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

We are changing the title and description to be consistent with the Gender Studies minor. Recently we changed the title and description of the minor from Women's Studies to Gender Studies. However, we did not change the title and description of this course.

B. List all other departments and programs that could be impacted by this proposal. For example, any department or program that:

a. **requires the course**
b. **offers the course as an elective**
c. **offers a similar course**
d. **has an equated course**
e. **has the course listed as a co-requisite or pre-requisite**
f. **shares staff and/or resources**

None

C. Explain the potential impact on the other departments and programs.

None

D. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

None

III. ADDITIONAL INFORMATION

A. If this is a change that effects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

GST 490 Gender Studies Capstone. This course is designed to integrate knowledge and understanding of gender studies issues through a mastery of research strategies and creative expressions as applied to the students' professional goals.

Please insert (paste) any supporting documentation here. If you have no supporting information, please

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form
Revised September 2016

Course:	HLTH 301 Health, Safety and Nutrition for Early Elementary
Department:	
College	Kinesiology, Health, and Imaging Sciences

Signatures

Manuel Probst — 10-21-19
Originator (Print and Sign) — Date

Jennifer Dearden — (✓) Approved ( ) Disapproved — 10.16.19
Departmental Curriculum Committee Approval (Print and Sign) — Date

Manuel Probst — (✓) Approved ( ) Disapproved — 10-21-19
Department Chair's Approval (Print and Sign) — Date

DIRK GRUPE — (✓) Approved ( ) Disapproved — 2019-Nov-18
College Curriculum Committee Approval (Print and Sign) — Date

WAYNE MILLER — (✓) Approved ( ) Disapproved — 11/18/2019
Dean's Approval (Print and Sign) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council Approval (if appropriate) (Print and Sign) — Date

Laurie Couch — (✓) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee Action (Print and Sign) — Date

(✓) Approved ( ) Disapproved — 12-16-19
Vice President for Academic Affairs (Print and Sign) — Date

For Academic Programs Office Use Only

Date proposal received in Academic Programs Office: _____

Date Academic Programs notified SAC's Liaison: _____

Deleted Program Suspension Date: _____ Final Program Deletion Date: _____

SACS Response: ☐ Approved ☐ Denied ☐ Revision Required SAC's Response Date: _____

Date Academic Programs notified of SAC's Response: _____ CPE Notification Date: _____

COURSE
Minor Revision to an Existing Course

I. COURSE

This outline is to be used to report a minor modification (e.g., title, prefix, course number, catalog course description, minor admission or completion requirements, equate a current course with a new course) of previously approved courses. *Minor changes do not modify course content.* If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
Current Course Name:	HLTH	301	Health, Safety and Nutrition for Early Elementary	3-0-3	Fall/Spring
Proposed Course Name:	HLTH	301	Health, Safety and Nutrition for Early Elementary	3-0-3	Fall/Spring

List departments and programs that could be impacted by this proposal.

Early Childhood, Elementary, Middle Grades and Special Education; Foundational and Graduate Studies

List the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Tim Simpson, April Miller, Charles Brooks e-mail and face to face

II. JUSTIFICATION:

Supply justification for the change and describe briefly what this proposal is requesting. (What are you doing and why are you doing it?)

We want to add EDF 207 Foundations of Education as a prerequisite to HLTH 301. HLTH 301 is a course that was offered to students in the Health and Physical Education p-12 programs and contains a teacher observation component that is designed for students in the teacher education programs. The HPE major in the DKHIS is closing after spring 2020 and the remaining students no longer need the course. However, many students in the Health Promotion area/major as well BUS majors register for the course and don't know about the teacher observation hours until it's "too late". This course tends to reach its cap of 29 quite readily, and, therefore, these non-education students may prevent teacher education students from taking the course on time. Therefore, the aim of this revision is to limit entry into the class by adding the prerequisite EDF 207 Foundations of Education. Finally, the prerequisite HS 101 should be removed since the course no longer exists.

III. ADDITIONAL INFORMATION

If this is a change that affects the current MSU Undergraduate Catalog content, please provide the verbiage as you would like for it to appear in the MSU Undergraduate catalog.

HLTH 301 - Health, Safety and Nutrition for Early Elementary (3-0-3) Educational theory and methods as applied to teaching health education to young children. Focuses upon content, resources and methodologies. Laboratory experiences are an integral part of the course. Prerequisite: EDF 207 and HLTH 151

MINOR or CERTIFICATE

Creation of a Minor or Certificate
Undergraduate Curriculum Routing Form

Revised January 2019

Minor or Certificate:	Interdisciplinary Research Methods MINOR
Department: (as listed in current catalog)	History, Philosophy, Politics, Global and Legal Studies, School of Humanities and Social Sciences
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

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Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee (Sign and Print) — Date

D. Murphy — (✓) Approved ( ) Disapproved — 11-21-19

Department Chair or Associate Dean (Sign and Print) — Date

Alana Scott Alana Scott — (✓) Approved ( ) Disapproved — 11-21-19

College Curriculum Committee (Sign and Print) — Date

[signature] — (✓) Approved ( ) Disapproved — 11-22-19

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch — (✓) Approved ( ) Disapproved — 12/16/19

Undergraduate Curriculum Committee (Sign and Print) — Date

[signature] — (✓) Approved ( ) Disapproved — 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Minor or Certificate:	Interdisciplinary Research Methods
Department: (as listed in current catalog)	History, Philosophy, Politics, Global and Legal Studies, School of Humanities and Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

Helpful Information:

1. Important Definitions Used in the Curriculum Process
   - Minor = a set of discipline-specific courses of at least 21 hours
   - Certificate = a series of courses related to a specific topic or skill with a prescribed number of hours. For additional information contact the Office of Academic Programs at 783-2003 or email undergraduate@moreheadstate.edu.
     - More than 50% of certificate credit hours must be 300 level or above and students must have a major on file.
     - Certificate program must be completed in less than one academic year and must be completed in less than 30 credit hours.
     - Completion of a certificate does not replace a minor for program completion.
   - Equated courses vs. cross-listed courses = equated courses are courses of identical content that have different prefixes (and are approved through the undergraduate curriculum process), whereas cross-listed courses have the same instructor and are offered at the same time/location.
   - Pre-requisite = course(s) that a student must successfully complete prior to registering for a more advanced course.
   - Co-requisite = course(s) that a student must take concurrently with another course.

2. Any proposal with a secondary education component must be routed through the Teacher Education Council.

3. The initiator is responsible for tracking a proposal through the approval process.

4. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☐	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	Each course has been reviewed for pre-requisites, co-requisites or testing requirements. There are no hidden pre-requisites, co-requisites, or testing requirements.	☑
☑	If the proposal is a certificate, more than 50% of the credit hours are 300 level or above.	☑
☑	If the proposal is a certificate, the proposal includes language that students must have a major on file.	☑
☑	If the proposal is a certificate, there is language that the program must be completed in less than one academic year.	☑
☑	If the proposal is a certificate, it contains less than 30 credit hours.	☑
☑	If the proposal is a certificate, there is language in the proposal to indicate that it does not replace a minor for program completion.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

James R. Masterson — James R Masterson — 10/4/19

Originator (Sign and Print) — Approval Date

Scott Davison — Scott Davison — 10-22-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

MINOR or CERTIFICATE
Creation of a Minor or Certificate Form

The outline below is to be used for the creation of a minor or certificate. Any new course included in this minor or certificate requires a separate "New Course or Major Revision of Existing Course" proposal. A revision to an existing minor or certificate should use the "Revision of a Minor or Certificate form".

☒ **Creation of a Minor** ☐ **Creation of a Certificate**

- More than 50% of certificate credit hours must be 300 level or above and students must have a major on file.
- Certificate program must be completed in less than one academic year and must be completed in less than 30 credit hours.
- Completion of a certificate does not replace a minor for program completion.

I. MINOR OR CERTIFICATE INFORMATION

State the proposed title of the Minor or Certificate

Interdisciplinary Research Methods

CIP Code	***Contact your department chair or associate dean to verify the correct CIP code information.***
45.0102	

II. NEED AND JUSTIFICATON

A. State the purpose of the Minor or Certificate (what are you doing?).

A minor in Interdisciplinary Research Methods will provide students with a robust training in research methodology, data collection, descriptive and advanced statistical data analysis, spatial analysis, and data communication skills. Students will learn to use industry-standard software for online survey design and collection, and data and spatial analysis techniques. Students are responsible for reviewing prequisite courses or seeking permission of instuctor for enrollment in some courses. Students completing this minor may not be awarded the Certificate in Research and Analytical Skills.

B. State specific reasons for this minor or certificate (why are you doing it?).

Research analysis skills are in high demand among employers. A minor in Interdisciplinary Research Methods gives students a depth of training in research methodology and demonstrable skills using industry-standard software that are not available in any current program at MSU. Furthermore, for many students in liberal arts programs, a minor in Interdisciplinary Research Methods helps to demonstrate to potential employers the acquisition of skills needed to fill data/research analyst positions, which complement their training in various liberal arts programs offered on campus.

C. If a similar program exists at MSU or in Kentucky, identify that program and provide justification for the duplication.

None exists

D. List special admission requirements and/or limitations on enrollment.

None

III. GOALS AND OBJECTIVES

A. What are the learning outcomes for the minor or certificate?

1. Student will demonstrate knowledge of and engage in the social scientific research process.
2. Students will demonstrate knowledge of qualitative and quantitative research methods.
3. Students will demonstrate the ability to use industry-standard data and spatial analysis software.
4. Students will learn to create, structure and analyze data to address social and policy problems.
5. Students will demonstrate the ability to apply and interpret descriptive and advanced statistical techniques to analyze data.

B. List the methods of program assessment to be used, other than course grades, to ensure that the desired outcomes or competencies are attained by students. Indicate the frequency of assessment and how results will be made available to program faculty.

Students will complete a portfolio of learning derived from course work created in the core courses. The specific items of the portfolio and the course in which it is required is as follows:
1. Literature Review (SOC 450 Research Methodologies)
2. Research or Grant Proposal, based off of literature review (SOC 450 Research Methodologies)
3. Survey Instrument (COMS 200 Strategic Communications Research)
4. Focus Group Manual (COMS 200 Strategic Communications Research)
5. Research Manuscript using Advanced Statistical Techniques (POLS 200 Methods of Political Inquiry)
6. Research Poster using Advanced Spatial Analysis Techniques (GEO 349 Introduction to GIS)
The following faculty have agreed to review each portfolio according to the attached rubric:
Dr. Timothy Hare (SSWC) - teaches SOC 450 and GEO 349
Dr. Suzanne Tallichet (SSWC) - teaches SOC 450
Dr. Donell Murray (CML) - teaches COMS 200
Dr. James Masterson (HPPGL) - teaches POLS 200
Review of portfolio will take place after a student completes all core courses and submits their portfolio.

C. What are the goals and objectives of this proposal?

1. Prepare students to conduct data analysis in accordance with social scientific research processes using industry-standard software.
2. Prepare students to create, structure and analyze large datasets for descriptive and predictive outcomes using industry-standard software.
3. Prepare students to analyze spatial mapping data for descriptive and predictive outcomes using industry-standard software.

D. Explain how the specific goals and objectives of the minor or certificate relate to the mission statement of the University.

The first clause of the University Mission Statement is to "educate students for success in a global environment" and the second clause is to "engage in scholarship." Businesses, governments, and other organizations, inside and outside of the US, have great needs to analyze organizational and user data by applying scientific research principles. Students who complete this minor will learn many of the necessary tools, both analytic and software skills, to obtain positions within these organizations across the globe to conduct research scholarship and data analytics.

The proposed minor is interdisciplinary in nature. As such, it supports the third clause of the University Mission, to "promote diversity of people and ideas." Core courses in the proposed minor come from four different disciplines; Political Science, Sociology, Communications, and Geography. The fourth clause of the University Mission is to "foster innovation, collaboration, and creative thinking." This is the essense of interdisciplinary research methods: to foster innovative and creative ways to solve problems through analyzing data that is collaboratively shared and presented to others for policy recommendations and implemention, strategic development and planning, or continuous improvement of user experience or brand recognition. Whether used for policy or products, for businesses, governments or non-profits, research methods are used to support quality of life improvements in our communities, the final clause of MSU's mission statement.

The proposed minor in Interdisciplinary Research Methods helps support MSU's Strategic Plan in several ways. First, such a minor helps MSU recruit engaged students, the first goal of its strategic plan. It does this because such a minor requires students to learn by doing, not simply by attending lectures, and doing readings and writings. Students in the proposed minor must be engaged with research methods and data analytics by learning specific industry-standard software through the program, and will compile a portfolio of learning that demonstrates student attainment of research skills throughout the program core.

The proposed minor also supports the second goal of the University's Strategic Plan under "Academic Success" by offering a high quality program that promotes student success. The proposed program does this by providing students, particularly those majoring in a liberal arts major, with the opportunity to learn industry-standard software used in research and data analytics, which supports their creative and critical thinking skills, among others, attained in most liberal arts programs. This will lead to students aquiring more marketable job skills upon graduation, and thereby leading to higher employment rates after graduation. And last, the proposed minor also supports the fifth goal of fostering a culture of research that engages students. The objective of this proposed minor is to create a culture of research among interested students and engage them in learning about research through the use of industry-standard software for research and data analytics.

IV. IMPACT

A. List all departments and programs that could be impacted by this proposal. For example, any

department that:

- **a. offers required courses for this minor or certificate**
- **b. offers elective courses for this minor or certificate**
- **c. offers similar courses contained in this minor or certificate**
- **d. has an equated course**
- **e. has courses in this proposal listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

1. History, Philosophy, Politics, Global and Legal Studies (HPPGL)
2. Sociology, Social Work and Criminology (SSWC)
3. Communications, Media and Languages (CML)
4. Psychology (PSY)
5. Computer Information Systems (CIS)
6. Mathematics (Math)

B. Explain the potential impact on the other departments and programs.

A minor in Interdisciplinary Research Methods provides students from any major with an opportunity to enhance their social scientific research skills while learning industry-standard software. A minor in Interdisciplinary Research Methods is particularly complementary to majors found in the following Departments: HPPGL, SSWC, CML. Aside from offering students a new minor in which to enroll, there are minimum impacts to any other department on campus. However, a minor in Interdisciplinary Research Methods is likely to draw in new students who may otherwise not attend MSU because of its appeal in providing students with job-ready skills in demand by employers. As such, departments may find an increase in new majors as a result of students coming to MSU due to the opportunities afforded to them by this proposed minor.

C. List each of the individuals in other departments and programs notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Timothy Hare (SSWC) - Face-to-face meeting
Dr. Suzanne Tallichet (SSWC) - Face-to-face meeting
Dr. Donell Murray (CML) - Face-to-face meeting
Dr. Ned Breschel (SSWC) - Email
Dr. Jonathan Nelson (SBA) - Email
Dr. Alana Scott (HPPGA) - Face-to-face meeting
Dr. Christina Conroy (HPPGA) - Face-to-face meeting
Dr. Greg Corso (PSY) - Phone conversation, with proposal sent via Email.
Dr. J. Michael Dobranski (Math) - Email

V. PERSONNEL

A. List the name(s), qualifications including highest earned degree, and academic rank(s) of departmental faculty who will teach courses in this minor or certificate.

Core Courses:
Dr. Timothy Hare (SSWC) - PhD, Anthropology, Professor
Dr. Suzanne Tallichet (SSWC) - PhD, Sociology, Professor
Dr. Donell Murray (CML) - EdD, Education, Instructor
Dr. James Masterson (HPPGL) - PhD, Political Science, Associate Professor
Elective Courses:
Dr. Alana Scott (HPPGL) - PhD, History, Associate Professor
Dr. Christina Conroy (HPPGL) - PhD, Philosophy, Assoicate Professor
Dr. Scott Davison (HPPGL) - PhD, Philosophy, Professor
Dr. Greg Corso (Psychology) - PhD, Psychology, Professor and Department Chair
Dr. Gilbert Remillard (Psychology) - PhD, Psychology, Associate Professor
Dr. Sam Nataraj (Information Systems) - PhD, Management of Information Systems, Professor
Dr. J. Michael Dobranski (Mathematics) - PhD, Mathematics, Associate Professor

B. Identify external or adjunct faculty, if appropriate.

None needed.

C. List any additional support personnel (clerical, laboratory assistants, and technicians) needed for implementation.

None needed, all courses are already taught.

D. List present and anticipated faculty necessary to offer this minor or certificate. List additional faculty including academic rank and qualifications, who must be employed during the next four years if this is implemented.

Dr. Timothy Hare (SSWC) - PhD, Anthropology, Professor
Dr. Suzanne Tallichet (SSWC) - PhD, Sociology, Professor
Dr. Donell Murray (CML) - EdD, Education, Instructor
Dr. James Masterson (HPPGL) - PhD, Political Science, Associate Professor

VI. ADDITIONAL INFORMATION

A. State the desired implementation date for the minor or certificate.

Fall 2020

B. Anticipated enrollment and number of graduates from this program for the next four years.

Year	Enrollment	Graduates
2020-2021	8	6
2021-2022	10	8
2022-2023	12	9
2023-2024	14	11

C. Explain any additional or remodeled facilities that will be required.

None

D. List any additional equipment required.

None

E. Provide the estimated additional cost required to support this minor or certificate for the next four years. Identify source of new funds (special legislative request, system reallocation, etc.).

None

F. List Special admission requirements and/or limitations on enrollment.

None

G. Program *coherence* refers to: 1) appropriate sequencing of courses, not a mere bundling of credits, so that 2) student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Does the program embody a coherent course of study?

Students will start the minor with either SOC 450 Research Methodology or COMS 200 Strategic Communications Research. Students will learn the foundations of social scientific research methods, understanding the differences betweeen qualititative and quantitative research, and the technical terms of research methodology in SOC 450 and COMS 200. Students in COMS 200, aside from learning foundational principles of social scientific research, will learn how to conduct surveys and focus groups, and will develop questionnare instruments to conduct both types of data collection techniques.

Student will then advance to take POLS 200 Methods of Political Inquiry where they will learn how to work with large datasets, manage, transform and code data and variables, and demonstrate their learning of descriptive and advanced statatistical techniques using industry-standard software such as SPSS. Last in the core, students, now equiped with the tools to manage and transform data, will learn how to conduct spatial analysis and digitial mapping techniques using Arc GIS software in GEO 349 Introduction to GIS.

Students will use the skills learned in the core classes to support their learning in the electives courses. Skills in research methodology taught throughout the core course are reinforced in each of the elective courses. Skills involving creating anotated bibliographic research found in SOC 450 and COMS 200 are reinforced in HST 300 Practicing History, SOC

455 Qualitative Research Methods, and UTCH 400 Research Methods for Science electives. Skills in deductive and inductive reasoning taught in SOC 450 are supported in PHIL 106 Beginning Logic. Skills in database management, data processing, and descriptive and advanced statistical techniques used for predicitve outcomes found in POLS 200 are used to support learning in the following electives: CIS 385 Introduction to Buisness Analytics, RAPP 202 Basic Computer Techniques in Regional Analysis, POLS 384 Intelligence Analysis, PSY 281 and 282 Experimental Design and Analysis I & II, UTCH 400 Research Methods for Science and SOC 451 Quantitative Research Methods. Last, skills using Arc GIS software and mapping analysis taught in GEO 349 Introduction to GIS are built upon in GEO 351 Geographical Information Systems.

No matter which elective courses are taken by the student, skills taught in the core courses for this minor are reinforced with learning that takes place in the elective courses.
Additionally, student materials for their required portfolio grow in difficulty throughout their progession of core classes. For instance, student in SOC 450 complete a literature review and research or grant proposal. Students in COMS 200 develop an annotated biblography, survey instrument and focus group manual. Students in POLS 200 complete a manuscript, with a literature review, research design testing hypothesis, and data anaysis and presentation of the results. Last, in GEO 349 students complete a research project using spatial analytical techniques and present these results in a poster format. Each course in the core has an output that is progressively more and more difficult, and builds on the previous core courses.

Ideally, students would take SOC 450 and COMS 200 in the fall, and POLS 200 in the spring. In the next fall semester students would take GEO 349 and an elective course. In the next spring, students would complete two more elective courses to complete the program. Students would submit their completed portfolio at the conclusion of their core courses.

H. Please use the template below to list all minor or certificate courses.

Example of different types of entries. Not all minors or certificates will have all types of entries.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MSU	300	Upper level course	3
MSU	400	Variable hour course	1-3
Variable		Free Electives	9

List each specific course required in the minor or certificate. To create additional lines, tab while the cursor is in the last "Course Hours" field.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
SOC	450	Research Methodology	3
COMS	200	Strategic Communications Research	3
POLS	200	Methods of Political Inquiry	3
GEO	349	Introduction to GIS	3
Electives			9-11
CIS	385	Introduction to Business Analytics	3
GEO	351	Geographical Information Systems	3
HST	300	Practicing History	3
PHIL	106	Beginning Logic	3
PHIL	400	Philosophy of Science	3

PPOL	205	Conducting Public Policy Research	3
PSY	281	Experimental Design and Analysis I	4
PSY	282	Experimental Design and Analysis II	4
RAPP	202	Basic Computer Techniques in Regional Analysis	3
SOC	451	Quantitative Research Methods	3
SOC	455	Qualitative Research Methods	3
UTCH	400	Research Methods for Science	3

Total Minor Hours	**21-23**

PROGRAM
Minor Revision to an Existing Program
Undergraduate Curriculum Routing Form

Revised January 2019

Program: (as listed in current catalog)	Legal Studies Area BA
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy Dianna Murphy — (✓) Approved ( ) Disapproved — 10.24.19
Department Chair or Associate Dean (Sign and Print) — Date

Alana Scott Alana Scott — (✓) Approved ( ) Disapproved — 10/31/2019
College Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved — 11-13-19
Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Conner — (✓) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved — 12-16-19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Legal Studies Area BA
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College: (as listed in current catalog)	Caudill College of Artis, Humanities and Social Sciences

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

D. Murphy Dianna Murphy 10.24.19

Originator (Sign and Print) Approval Date

Scott Davison 10-22-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

PROGRAM
Minor Revision to an Existing Program

The following outline is to be used to report a minor modification of a previously approved program. *If the program content or method of instruction is to be modified, use the "Major Revision of an Existing Program" form.* Minor changes may include a change in program title or minor admission or completion requirements which *do not modify program content.* Please list each program change on a separate proposal form.

I. PROGRAM INFORMATION

State the current title of the program (as listed in the current catalog)

Legal Studies

State the proposed revised title of the program (if applicable)

CIP Code - ***Contact your department chair or associate dean to verify the correct CIP code information.***

22.0000

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what you are doing and why are you doing it? Content will be listed at the end of the document.

The change will require all students in the legal studies programs, including the major, area, and minor to earn a grade of a 'C' or higher in each course taken that has an LGS course prefix. Students may not retake more than two LGS courses to meet this requirement and may only retake a course once to meet the requirement. Students also must maintain a 2.25 GPA in the legal studies program major, area, and minor. The Legal Studies major and area programs have a mandatory internship of three credit hours that is taken at, or near, the completion of the student's course work. Under the direction of an licensed attorney, the program's interns assume an important role in the delivery of legal services that affect clients' legal rights. At least two states allow limited licensure of paralegals to deliver legal services and several more are considering it. It is imperative that students placed in internships and the legal profession are knowledgeable and competent to perform legal work. The Kentucky Supreme Court Rule 3.7 defines a paralegal as follows:

"A paralegal is a person under the supervision and direction of a licensed lawyer, who may apply knowledge of law and legal procedures in rendering direct assistance to lawyers engaged in legal research; design, develop or plan modifications or new procedures, techniques, services, processes or applications; prepare or interpret legal documents and write detailed procedures for practicing in certain fields of law; select, compile and use technical information from such references as digests, encyclopedias or practice manuals; and analyze and follow procedural problems that involve independent decisions."

B. Program *coherence* refers to 1)appropriate sequencing of courses, not a mere bundling of credits, so that 2)student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Describe any impacts to coherence that the proposed revisions to the program may have.

The only impact is to ensure that students successfully meet course and program competencies that they will need to perform professional work as an intern, and beyond.

C. Do the proposed changes impact the program's alignment with the program's mission and goals and/or the University's mission and goals? If yes, explain.

No.

D. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

a. offers required courses for this program
b. offers elective courses for this program
c. offers similar courses in their program
d. has an equated course

e. has courses in this proposal listed as a co-requisite or pre-requisite

f. shares staff and/or resources.

Only the Legal Studies program is effected by the change.

E. Explain the potential impact on the other departments and programs.

N/A

F. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

N/A

G. If this is a change that affects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

Program Standards

All students in the legal studies programs, including the major, area, and minor must earn a grade of a 'C' or higher in each course taken that has an LGS course prefix. Students may not retake more than two LGS courses to meet this requirement, and may only retake a course once to meet the requirement. Students also must obtain an overall 2.25 GPA in the legal studies program major, area, or minor in order to complete the program requirements for a degree in legal studies or complete a legal studies minor.

PROGRAM
Minor Revision to an Existing Program
Undergraduate Curriculum Routing Form

Revised January 2019

Program: (as listed in current catalog)	Legal Studies Major BA
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures ***(Signatures must be handwritten; electronic signatures are not accepted.)***

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy Dianna Murphy (✓) Approved ( ) Disapproved 10.24.19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 10/31/2019
Coliege Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-13-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

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Laurie Conat (✓) Approved ( ) Disapproved 12/10/19
Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Legal Studies
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College: (as listed in current catalog)	Caudill College of Artis, Humanities and Social Sciences

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

D. Murphy Dianna Murphy — 10.24.19

Originator (Sign and Print) — Approval Date

Scott Davison — 10-22-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

PROGRAM
Minor Revision to an Existing Program

The following outline is to be used to report a minor modification of a previously approved program. *If the program content or method of instruction is to be modified, use the "Major Revision of an Existing Program" form.* Minor changes may include a change in program title or minor admission or completion requirements which *do not modify program content.* Please list each program change on a separate proposal form.

I. PROGRAM INFORMATION

State the current title of the program (as listed in the current catalog)

Legal Studies Major BA

State the proposed revised title of the program (if applicable)

CIP Code - *Contact your department chair or associate dean to verify the correct CIP code information.*

22.0000

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what you are doing and why are you doing it? Content will be listed at the end of the document.

The change will require all students in the legal studies programs, including the major, area, and minor to earn a grade of a 'C' or higher in each course taken that has an LGS course prefix. Students may not retake more than two LGS courses to meet this requirement and may only retake a course once to meet the requirement. Students also must maintain a 2.25 GPA in the legal studies program major, area, and minor. The Legal Studies major and area programs have a mandatory internship of three credit hours that is taken at, or near, the completion of the student's course work. Under the direction of an licensed attorney, the program's interns assume an important role in the delivery of legal services that affect clients' legal rights. At least two states allow limited licensure of paralegals to deliver legal services and several more are considering it. It is imperative that students placed in internships and the legal profession are knowledgeable and competent to perform legal work. The Kentucky Supreme Court Rule 3.7 defines a paralegal as follows:

"A paralegal is a person under the supervision and direction of a licensed lawyer, who may apply knowledge of law and legal procedures in rendering direct assistance to lawyers engaged in legal research; design, develop or plan modifications or new procedures, techniques, services, processes or applications; prepare or interpret legal documents and write detailed procedures for practicing in certain fields of law; select, compile and use technical information from such references as digests, encyclopedias or practice manuals; and analyze and follow procedural problems that involve independent decisions."

B. Program *coherence* refers to 1)appropriate sequencing of courses, not a mere bundling of credits, so that 2)student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Describe any impacts to coherence that the proposed revisions to the program may have.

The only impact is to ensure that students successfully meet course and program competencies that they will need to perform professional work as an intern, and beyong.

C. Do the proposed changes impact the program's alignment with the program's mission and goals and/or the University's mission and goals? If yes, explain.

No.

D. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

a. offers required courses for this program
b. offers elective courses for this program
c. offers similar courses in their program
d. has an equated course

e. has courses in this proposal listed as a co-requisite or pre-requisite

f. shares staff and/or resources.

Only the Legal Studies program is effected by the change.

E. Explain the potential impact on the other departments and programs.

N/A

F. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

N/A

G. If this is a change that affects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

Program Standards

All students in the legal studies programs, including the major, area, and minor must earn a grade of a 'C' or higher in each course taken that has an LGS course prefix. Students may not retake more than two LGS courses to meet this requirement, and may only retake a course once to meet the requirement. Students also must obtain an overall 2.25 GPA in the legal studies program major, area, or minor in order to complete the program requirements for a degree in legal studies or complete a legal studies minor.

PROGRAM
Minor Revision to an Existing Program
Undergraduate Curriculum Routing Form

Revised January 2019

Program: (as listed in current catalog)	Legal Studies Minor
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy Dianna Murphy — (✓) Approved ( ) Disapproved — 10.24.19
Department Chair or Associate Dean (Sign and Print) — Date

Alana Scott Alana Scott — (✓) Approved ( ) Disapproved — 10/31/2019
College Curriculum Committee (Sign and Print) — Date

Erin — (✓) Approved ( ) Disapproved — 11-13-19
Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch — (✓) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee (Sign and Print) — Date

[signature] — (✓) Approved ( ) Disapproved — 12-16-19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Legal Studies
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College: (as listed in current catalog)	Caudill College of Artis, Humanities and Social Sciences

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

D. Murphy Dianna Murphy 10.24.19

Originator (Sign and Print) Approval Date

Scott Davison 10-22-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

PROGRAM
Minor Revision to an Existing Program

The following outline is to be used to report a minor modification of a previously approved program. *If the program content or method of instruction is to be modified, use the "Major Revision of an Existing Program" form.* Minor changes may include a change in program title or minor admission or completion requirements which *do not modify program content.* Please list each program change on a separate proposal form.

I. PROGRAM INFORMATION

State the current title of the program (as listed in the current catalog)

Legal Studies Minor

State the proposed revised title of the program (if applicable)

CIP Code - *Contact your department chair or associate dean to verify the correct CIP code information.*

22.0000

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what you are doing and why are you doing it? Content will be listed at the end of the document.

The change will require all students in the legal studies programs, including the major, area, and minor to earn a grade of a 'C' or higher in each course taken that has an LGS course prefix. Students may not retake more than two LGS courses to meet this requirement and may only retake a course once to meet the requirement. Students also must maintain a 2.25 GPA in the legal studies program major, area, and minor. The Legal Studies major and area programs have a mandatory internship of three credit hours that is taken at, or near, the completion of the student's course work. Under the direction of an licensed attorney, the program's interns assume an important role in the delivery of legal services that affect clients' legal rights. At least two states allow limited licensure of paralegals to deliver legal services and several more are considering it. It is imperative that students placed in internships and the legal profession are knowledgeable and competent to perform legal work. The Kentucky Supreme Court Rule 3.7 defines a paralegal as follows:

"A paralegal is a person under the supervision and direction of a licensed lawyer, who may apply knowledge of law and legal procedures in rendering direct assistance to lawyers engaged in legal research; design, develop or plan modifications or new procedures, techniques, services, processes or applications; prepare or interpret legal documents and write detailed procedures for practicing in certain fields of law; select, compile and use technical information from such references as digests, encyclopedias or practice manuals; and analyze and follow procedural problems that involve independent decisions."

B. Program *coherence* refers to 1)appropriate sequencing of courses, not a mere bundling of credits, so that 2)student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Describe any impacts to coherence that the proposed revisions to the program may have.

The only impact is to ensure that students successfully meet course and program competencies that they will need to perform professional work as an intern, and beyong.

C. Do the proposed changes impact the program's alignment with the program's mission and goals and/or the University's mission and goals? If yes, explain.

No.

D. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

a. offers required courses for this program
b. offers elective courses for this program
c. offers similar courses in their program
d. has an equated course

e. has courses in this proposal listed as a co-requisite or pre-requisite

f. shares staff and/or resources.

Only the Legal Studies program is effected by the change.

E. Explain the potential impact on the other departments and programs.

N/A

F. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

N/A

G. If this is a change that affects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

Program Standards

All students in the legal studies programs, including the major, area, and minor must earn a grade of a 'C' or higher in each course taken that has an LGS course prefix. Students may not retake more than two LGS courses to meet this requirement, and may only retake a course once to meet the requirement. Students also must obtain an overall 2.25 GPA in the legal studies program major, area, or minor in order to complete the program requirements for a degree in legal studies or complete a legal studies minor.

COURSE

Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 090 Pre-Algebra
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee — Chris Schroeder — (✓) Approved ( ) Disapproved — 11/1/19
Department Chair or Associate Dean (Sign and Print) — Date

College Curriculum Committee (Sign and Print) — Dirk Grunwald — (✓) Approved ( ) Disapproved — 2019-Nov-18
Date

Dean (Print and Sign) — Wayne Micek — (✓) Approved ( ) Disapproved — 11/18/2019
Date

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — ( ) Approved ( ) Disapproved
Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch — (✓) Approved ( ) Disapproved — 12/4/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) — Date

Laurie Couch — (✓) Approved ( ) Disapproved — 12/4/19
Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved — 12-4-19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Form

This outline is to be followed for **course** deletion, suspension, or reinstatement.

I. INDIVIDUAL COURSE

Course Name: (as listed in current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	090	Pre-Algebra	3-0-3	Fall/Spring

Type of Action:	
☐	**Deletion** - course will be removed and cannot be reinstated.
☒	**Suspension** - course will be marked as suspended; can be reinstated with a reinstatement proposal.
☐	**Reinstatement** - brings back from suspension. Cannot be used if course has been permanently deleted.

II. EXPLANATION:

A. Why is the course to be deleted/suspended/reinstated?

This course served as a remedial course for students who didn't meet benchmark to take a credit-bearing mathematics course. To give these students a better chance of graduating, the department developed Corequisite (or so-called "Enhanced") versions of each of four General Education entry-level mathematics courses. These Enhanced courses are designed to provide the remediation that these students need while taking the credit-bearing course. Since all students can now enroll in a credit-bearing mathematics course, this developmental course is no longer needed.

B. Impact on Enrollment (University, Department, Program).

There will be no impact on the University or any department or program in the University. This course has not been offered since Fall 2018.

C. Impact on Staffing within the department and/or program.

Any impact from removing this course has already been absorbed by the Department of Mathematics.

D. Impact on Students within the department and/or program.

Since it is an entry-level course, no current or incoming students are or will be affected by the removal of this course.

E. List all other departments and programs that could be impacted by this proposal.
For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

No other departments or programs will be impacted by this proposal.

F. Explain the potential impact on each of the other departments and programs.

There will be no impact on other departments and programs.

G. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Since no other departments or programs will be impacted, no one has been notified.

COURSE
Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 091 Beginning Algebra
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee
Chris Schroeder (X) Approved ( ) Disapproved 11/1/19
Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUPE (X) Approved ( ) Disapproved 2019-Nov-18
College Curriculum Committee (Sign and Print) Date

Wayne Micek (X) Approved ( ) Disapproved 11/18/2019
Dean (Print and Sign) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch (X) Approved ( ) Disapproved 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch (X) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

(X) Approved ( ) Disapproved 12-6-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Chris Schroeder — 11/1/19 Approval Date

Department Curriculum Committee Chair (Sign and Print) — Josh Qualls — 11/1/19 Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Form

This outline is to be followed for **course** deletion, suspension, or reinstatement.

I. INDIVIDUAL COURSE

Course Name: (as listed in current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	091	Beginning Algebra	3-0-3	Fall/Spring

Type of Action:	
☐	**Deletion** - course will be removed and cannot be reinstated.
☒	**Suspension** - course will be marked as suspended; can be reinstated with a reinstatement proposal.
☐	**Reinstatement** - brings back from suspension. Cannot be used if course has been permanently deleted.

II. EXPLANATION:

A. Why is the course to be deleted/suspended/reinstated?

This course served as a remedial course for students who didn't meet benchmark to take a credit-bearing mathematics course. To give these students a better chance of graduating, the department developed Corequisite (or so-called "Enhanced") versions of each of four General Education entry-level mathematics courses. These Enhanced courses are designed to provide the remediation that these students need while taking the credit-bearing course. Since all students can now enroll in a credit-bearing mathematics course, this developmental course is no longer needed.

B. Impact on Enrollment (University, Department, Program).

There will be no impact on the University or any department or program in the University. This course has not been offered since Fall 2018.

C. Impact on Staffing within the department and/or program.

Any impact from removing this course has already been absorbed by the Department of Mathematics.

D. Impact on Students within the department and/or program.

Since it is an entry-level course, no current or incoming students are or will be affected by the removal of this course.

E. List all other departments and programs that could be impacted by this proposal.
For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

No other departments or programs will be impacted by this proposal.

F. Explain the potential impact on each of the other departments and programs.

There will be no impact on other departments and programs.

G. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Since no other departments or programs will be impacted, no one has been notified.

COURSE
Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 091A Beginning Algebra, Module A
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee — Chris Schroeder — (X) Approved ( ) Disapproved — 11/1/19
Department Chair or Associate Dean (Sign and Print) — Date

DIRK GROPE — ( ) Approved ( ) Disapproved — 2019-Nov-8
College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER — (X) Approved ( ) Disapproved — 11/18/2019
Dean (Print and Sign) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Cook — ( ) Approved ( ) Disapproved — 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) — Date

Laurie Cook — ( ) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved — 12/16/19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Form

This outline is to be followed for **course** deletion, suspension, or reinstatement.

I. INDIVIDUAL COURSE

Course Name: (as listed in current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	091A	Beginning Algebra, Module A	3-0-1	Fall/Spring

Type of Action:	
☐	**Deletion** - course will be removed and cannot be reinstated.
☒	**Suspension** - course will be marked as suspended; can be reinstated with a reinstatement proposal.
☐	**Reinstatement** - brings back from suspension. Cannot be used if course has been permanently deleted.

II. EXPLANATION:

A. Why is the course to be deleted/suspended/reinstated?

This course served as a remedial course for students who didn't meet benchmark to take a credit-bearing mathematics course. To give these students a better chance of graduating, the department developed Corequisite (or so-called "Enhanced") versions of each of four General Education entry-level mathematics courses. These Enhanced courses are designed to provide the remediation that these students need while taking the credit-bearing course. Since all students can now enroll in a credit-bearing mathematics course, this developmental course is no longer needed.

B. Impact on Enrollment (University, Department, Program).

There will be no impact on the University or any department or program in the University. This course has not been offered since Fall 2018.

C. Impact on Staffing within the department and/or program.

Any impact from removing this course has already been absorbed by the Department of Mathematics.

D. Impact on Students within the department and/or program.

Since it is an entry-level course, no current or incoming students are or will be affected by the removal of this course.

E. List all other departments and programs that could be impacted by this proposal.
For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

No other departments or programs will be impacted by this proposal.

F. Explain the potential impact on each of the other departments and programs.

There will be no impact on other departments and programs.

G. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Since no other departments or programs will be impacted, no one has been notified.

COURSE
Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form
Revised January 2018

Course: (as listed current catalog)	MATH 091B Beginning Algebra, Module B
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee
Chris Schroeder (X) Approved ( ) Disapproved 11/1/19
Department Chair or Associate Dean (Sign and Print) Date

DIRK GROFF (X) Approved ( ) Disapproved 2019-Nov-18
College Curriculum Committee (Sign and Print) Date

WAYNE MILLER (X) Approved ( ) Disapproved 11/18/2019
Dean (Print and Sign) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

(X) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Form

This outline is to be followed for **course** deletion, suspension, or reinstatement.

I. INDIVIDUAL COURSE

Course Name: (as listed in current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	091B	Beginning Algebra, Module B	3-0-1	Fall/Spring

Type of Action:	
☐	**Deletion** - course will be removed and cannot be reinstated.
☒	**Suspension** - course will be marked as suspended; can be reinstated with a reinstatement proposal.
☐	**Reinstatement** - brings back from suspension. Cannot be used if course has been permanently deleted.

II. EXPLANATION:

A. Why is the course to be deleted/suspended/reinstated?

This course served as a remedial course for students who didn't meet benchmark to take a credit-bearing mathematics course. To give these students a better chance of graduating, the department developed Corequisite (or so-called "Enhanced") versions of each of four General Education entry-level mathematics courses. These Enhanced courses are designed to provide the remediation that these students need while taking the credit-bearing course. Since all students can now enroll in a credit-bearing mathematics course, this developmental course is no longer needed.

B. Impact on Enrollment (University, Department, Program).

There will be no impact on the University or any department or program in the University. This course has not been offered since Fall 2018.

C. Impact on Staffing within the department and/or program.

Any impact from removing this course has already been absorbed by the Department of Mathematics.

D. Impact on Students within the department and/or program.

Since it is an entry-level course, no current or incoming students are or will be affected by the removal of this course.

E. List all other departments and programs that could be impacted by this proposal.
For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

No other departments or programs will be impacted by this proposal.

F. Explain the potential impact on each of the other departments and programs.

There will be no impact on other departments and programs.

G. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Since no other departments or programs will be impacted, no one has been notified.

COURSE

Course Deletion/Suspension/Reinstatement Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 091C Beginning Algebra, Module C
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee — Chris Schroede — (X) Approved ( ) Disapproved — 11/1/19
Department Chair or Associate Dean (Sign and Print) — Date

College Curriculum Committee (Sign and Print) — DIRK GRUPE — (X) Approved ( ) Disapproved — 2019-Nov-18
Date

Dean (Print and Sign) — ANNE MILLER — (X) Approved ( ) Disapproved — 11/19/2019
Date

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — ( ) Approved ( ) Disapproved
Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch — Laurie Couch — ( ) Approved ( ) Disapproved — 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) — Date

Laurie Couch — Laurie Couch — ( ) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved — 12-16-19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Form

This outline is to be followed for **course** deletion, suspension, or reinstatement.

I. INDIVIDUAL COURSE

Course Name: (as listed in current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	091C	Beginning Algebra, Module C	3-0-1	Fall/Spring

Type of Action:	
☐	**Deletion** - course will be removed and cannot be reinstated.
☒	**Suspension** - course will be marked as suspended; can be reinstated with a reinstatement proposal.
☐	**Reinstatement** - brings back from suspension. Cannot be used if course has been permanently deleted.

II. EXPLANATION:

A. Why is the course to be deleted/suspended/reinstated?

This course served as a remedial course for students who didn't meet benchmark to take a credit-bearing mathematics course. To give these students a better chance of graduating, the department developed Corequisite (or so-called "Enhanced") versions of each of four General Education entry-level mathematics courses. These Enhanced courses are designed to provide the remediation that these students need while taking the credit-bearing course. Since all students can now enroll in a credit-bearing mathematics course, this developmental course is no longer needed.

B. Impact on Enrollment (University, Department, Program).

There will be no impact on the University or any department or program in the University. This course has not been offered since Fall 2018.

C. Impact on Staffing within the department and/or program.

Any impact from removing this course has already been absorbed by the Department of Mathematics.

D. Impact on Students within the department and/or program.

Since it is an entry-level course, no current or incoming students are or will be affected by the removal of this course.

E. List all other departments and programs that could be impacted by this proposal.
For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

No other departments or programs will be impacted by this proposal.

F. Explain the potential impact on each of the other departments and programs.

There will be no impact on other departments and programs.

G. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Since no other departments or programs will be impacted, no one has been notified.

COURSE

Course Deletion/Suspension/Reinstatement Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 093 Intermediate Algebra
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUIS (X) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) Date

WAYNE MILLER (X) Approved ( ) Disapproved 11/18/2019

Dean (Print and Sign) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/10/19

AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(X) Approved ( ) Disapproved 12-6-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Form

This outline is to be followed for **course** deletion, suspension, or reinstatement.

I. INDIVIDUAL COURSE

Course Name: (as listed in current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	093	Intermediate Algebra	3-0-3	Fall/Spring

Type of Action:	
☐	**Deletion** - course will be removed and cannot be reinstated.
☒	**Suspension** - course will be marked as suspended; can be reinstated with a reinstatement proposal.
☐	**Reinstatement** - brings back from suspension. Cannot be used if course has been permanently deleted.

II. EXPLANATION:

A. Why is the course to be deleted/suspended/reinstated?

This course served as a remedial course for students who didn't meet benchmark to take a credit-bearing mathematics course. To give these students a better chance of graduating, the department developed Corequisite (or so-called "Enhanced") versions of each of four General Education entry-level mathematics courses. These Enhanced courses are designed to provide the remediation that these students need while taking the credit-bearing course. Since all students can now enroll in a credit-bearing mathematics course, this developmental course is no longer needed.

B. Impact on Enrollment (University, Department, Program).

There will be no impact on the University or any department or program in the University. This course has not been offered since Fall 2018.

C. Impact on Staffing within the department and/or program.

Any impact from removing this course has already been absorbed by the Department of Mathematics.

D. Impact on Students within the department and/or program.

Since it is an entry-level course, no current or incoming students are or will be affected by the removal of this course.

E. List all other departments and programs that could be impacted by this proposal.
For example, any department or program that:

a. **requires the course**
b. **offers the course as an elective**
c. **offers a similar course**
d. **has an equated course**
e. **has the course listed as a co-requisite or pre-requisite**
f. **shares staff and/or resources**

No other departments or programs will be impacted by this proposal.

F. Explain the potential impact on each of the other departments and programs.

There will be no impact on other departments and programs.

G. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Since no other departments or programs will be impacted, no one has been notified.

COURSE

Course Deletion/Suspension/Reinstatement Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 093A Intermediate Algebra, Module A
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee
Chris Schroeder (X) Approved ( ) Disapproved 12/1/19
Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUPE (X) Approved ( ) Disapproved 2019-Nov-8
College Curriculum Committee (Sign and Print) Date

Wayne Miller (X) Approved ( ) Disapproved 11/15/2019
Dean (Print and Sign) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

(X) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
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Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
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☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Form

This outline is to be followed for **course** deletion, suspension, or reinstatement.

I. INDIVIDUAL COURSE

Course Name: (as listed in current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	093A	Intermediate Algebra, Module A	3-0-1	Fall/Spring

Type of Action:	
☐	**Deletion** - course will be removed and cannot be reinstated.
☒	**Suspension** - course will be marked as suspended; can be reinstated with a reinstatement proposal.
☐	**Reinstatement** - brings back from suspension. Cannot be used if course has been permanently deleted.

II. EXPLANATION:

A. Why is the course to be deleted/suspended/reinstated?

This course served as a remedial course for students who didn't meet benchmark to take a credit-bearing mathematics course. To give these students a better chance of graduating, the department developed Corequisite (or so-called "Enhanced") versions of each of four General Education entry-level mathematics courses. These Enhanced courses are designed to provide the remediation that these students need while taking the credit-bearing course. Since all students can now enroll in a credit-bearing mathematics course, this developmental course is no longer needed.

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For example, any department or program that:

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F. Explain the potential impact on each of the other departments and programs.

There will be no impact on other departments and programs.

G. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Since no other departments or programs will be impacted, no one has been notified.

COURSE
Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 093B Intermediate Algebra, Module B
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee
Chris Schroeder (X) Approved ( ) Disapproved 11/1/19
Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUIK (X) Approved ( ) Disapproved 2019-Nov-18
College Curriculum Committee (Sign and Print) Date

Wayne Miller (X) Approved ( ) Disapproved 11/18/2019
Dean (Print and Sign) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Wells — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Form

This outline is to be followed for **course** deletion, suspension, or reinstatement.

I. INDIVIDUAL COURSE

Course Name: (as listed in current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	093B	Intermediate Algebra, Module B	3-0-1	Fall/Spring

Type of Action:	
☐	**Deletion** - course will be removed and cannot be reinstated.
☒	**Suspension** - course will be marked as suspended; can be reinstated with a reinstatement proposal.
☐	**Reinstatement** - brings back from suspension. Cannot be used if course has been permanently deleted.

II. EXPLANATION:

A. Why is the course to be deleted/suspended/reinstated?

This course served as a remedial course for students who didn't meet benchmark to take a credit-bearing mathematics course. To give these students a better chance of graduating, the department developed Corequisite (or so-called "Enhanced") versions of each of four General Education entry-level mathematics courses. These Enhanced courses are designed to provide the remediation that these students need while taking the credit-bearing course. Since all students can now enroll in a credit-bearing mathematics course, this developmental course is no longer needed.

B. Impact on Enrollment (University, Department, Program).

There will be no impact on the University or any department or program in the University. This course has not been offered since Fall 2018.

C. Impact on Staffing within the department and/or program.

Any impact from removing this course has already been absorbed by the Department of Mathematics.

D. Impact on Students within the department and/or program.

Since it is an entry-level course, no current or incoming students are or will be affected by the removal of this course.

E. List all other departments and programs that could be impacted by this proposal.
For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

No other departments or programs will be impacted by this proposal.

F. Explain the potential impact on each of the other departments and programs.

There will be no impact on other departments and programs.

G. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Since no other departments or programs will be impacted, no one has been notified.

COURSE

Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 093C Intermediate Algebra, Module C
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUNE (X) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) Date

WAYNE MICOLE (X) Approved ( ) Disapproved 11/18/2019

Dean (Print and Sign) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/11/19

AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Form

This outline is to be followed for **course** deletion, suspension, or reinstatement.

I. INDIVIDUAL COURSE

Course Name: (as listed in current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	093C	Intermediate Algebra, Module C	3-0-1	Fall/Spring

Type of Action:	
☐	**Deletion** - course will be removed and cannot be reinstated.
☒	**Suspension** - course will be marked as suspended; can be reinstated with a reinstatement proposal.
☐	**Reinstatement** - brings back from suspension. Cannot be used if course has been permanently deleted.

II. EXPLANATION:

A. Why is the course to be deleted/suspended/reinstated?

This course served as a remedial course for students who didn't meet benchmark to take a credit-bearing mathematics course. To give these students a better chance of graduating, the department developed Corequisite (or so-called "Enhanced") versions of each of four General Education entry-level mathematics courses. These Enhanced courses are designed to provide the remediation that these students need while taking the credit-bearing course. Since all students can now enroll in a credit-bearing mathematics course, this developmental course is no longer needed.

B. Impact on Enrollment (University, Department, Program).

There will be no impact on the University or any department or program in the University. This course has not been offered since Fall 2018.

C. Impact on Staffing within the department and/or program.

Any impact from removing this course has already been absorbed by the Department of Mathematics.

D. Impact on Students within the department and/or program.

Since it is an entry-level course, no current or incoming students are or will be affected by the removal of this course.

E. List all other departments and programs that could be impacted by this proposal.
For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

No other departments or programs will be impacted by this proposal.

F. Explain the potential impact on each of the other departments and programs.

There will be no impact on other departments and programs.

G. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Since no other departments or programs will be impacted, no one has been notified.

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	MATH 231 Mathematics for the Elementary Teacher I
Department (as listed in current catalog)	Department of Mathematics
College (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/8/19

Department Chair or Associate Dean (Sign and Print) Date

DIPA GUPTE (✓) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

WAYNE MILLER (✓) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

Chris Miller (✓) Approved ( ) Disapproved 12/6/19

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laura Conca ( ) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	MATH 231 Mathematics for the Elementary Teacher I
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The course title, department, and college names correspond to the current catalog.	☒
☒	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☒
☒	Responses are complete and applicable for each question.	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/8/19

Originator (Sign and Print) — Approval Date

Joshua Qualls — 11/14/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
Minor Revision to an Existing Course

Use this outline to report a minor modification of a previously approved course and to equate a *current* course with a new course. Minor revisions include title, prefix, course number, catalog course description, and admission requirements (test scores, pre-requisites, or co-requisites). ***Minor changes do not modify course content or the course formula.*** If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

I. COURSE

Current Course Name: (as listed in the current catalog)	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Faculty Load**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	MATH	231	Mathematics for the Elementary Teacher I	2.0	2-2-3	Fall/Spring
Proposed Course Name:	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Faculty Load**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	MATH	231	Mathematics for the Elementary Teacher I	2.0	2-2-3	Fall/Spring

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

For several years, the Basic Skills Test has been administered in MATH 231. This test helps ensure that future elementary teachers possess the rudimentary math skills that will be necessary to successfully teach mathematics at the elementary level. Students who are unable to pass the Basic Skills Test are not allowed to pass MATH 231. While we feel it is important that the students demonstrate this ability, we feel that it is unfair for the students to be asked to do it during the semester. In essence, it is making a prerequisite a part of the class. We are proposing to make passing the Basic Skills Test an official prerequisite of the course.

B. List all other departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

The Early Childhood, Elementary and Special Education Department will be impacted by this proposal.

C. Explain the potential impact on the other departments and programs.

This will have a positive impact on the students in the Elementary Education program. In effect, it prevents the people that would normally not pass MATH 231 from having to enroll in and pay for the class. It may give those students more time to focus on and study for the material on the Basic Skills Test and increase the number of students that are able to pass that exam.

D. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

The chair of the Early Childhood, Elementary and Special Education Department, April Miller, has been notified of the intended change and has indicated her support for it. In addition, this proposed change will be on the agenda at the upcoming December 4 Teacher Education Council meeting.

III. ADDITIONAL INFORMATION

A. If this is a change that effects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

MATH 231 - Mathematics for the Elementary Teacher I
(2-2-3) Number systems, primes and divisibility; fractions; decimals; real numbers; algebraic sentences. Designed for preservice teachers P-9.
Prerequisite: 1. MATH 123 or higher and 2. Successful completion of a basic skills exam in mathematics as approved by the Department of Mathematics.
Corequisite: MATH 231L

Please insert (paste) any supporting documentation here. If you have no supporting information, please remove this section from your proposal.

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised January 2018

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	MATH 310 ~~Geometric Algebra~~ 311
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) Date

DIRA GAUTE (X) Approved ( ) Disapproved 2019 - Nov - 18

College Curriculum Committee (Sign and Print) Date

WAYNE MILLER (X) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(X) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	MATH 310 Geometric Algebra 311
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	If an Information Technology signature is required, it has been obtained.	☒
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The course title, department, and college names correspond to the current catalog.	☒
☒	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The course description EXACTLY matches the course description stated in the syllabus.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☒
☒	Responses are complete and applicable for each question.	☒
☒	If the course requires the use of live animals, the IACUC form is attached.	☒
☒	The syllabus starts on a separate page.	☒
☒	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☒
☒	The syllabus contains the course title and course number (exactly as listed in the proposal).	☒
☒	The syllabus contains the academic term with date.	☒
☒	The syllabus contains the instructor's name.	☒
☒	The syllabus contains the office location.	☒

☒	The syllabus contains the instructor's office phone number and office hours schedule.
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.
☒	The syllabus contains a grading description and distribution (please be very specific).
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.01).
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.
☒	The entire proposal is saved as one Word document.

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Approval Date

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ New Course ☐ Revised Course

Course Name (as listed in the current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	311	Geometric Algebra	3-0-3	3	Fall

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Mathematics Major (General Track) – Bachelor of Science
Mathematics Area (MSUTeach Track) – Bachelor of Science
Mathematics Minor
Physics Area (Computational Physics Track) - Bachelor of Science

This is a ☐ required course. This is an ☒ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

MATH 311. Geometric Algebra. (3-0-3). This course is designed as an introduction to linear and geometric algebra. Linear algebra topics include vectors, vector spaces, matrices, inner and outer products, eigenvectors, and linear transformations. Extending these ideas to higher-dimensional objects gives geometric algebra; topics include oriented areas and volumes, multivectors, the geometric product, blades, complex numbers and quaternions, the exterior product, and an introduction to other algebras. Prequisites: MATH 175, and either MATH 301 or instructor permission.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

This course is intended to provide the necessary mathematical foundations for understanding linear and geometric algebra. Students in Mathematics will see topics from several areas of mathematics unify and be applied toward algebraic and geometric ideas having applications in physics, chemistry, economics, and more. This course is the next in a sequence about linear algebra and is not currently being offered by any course in the catalog despite being important in both graduate school and contemporary mathematical research.

B. Justify the proposed instructional level (100-600) or instructional level change.

This course is intended for students who have completed at least two years of study at the university. Intellectual depth and mathematical maturity are required to master the mathematics of geometric algebra. The course uses calculus and proofs, and it both develops and uses the techniques of linear algebra to study problems in geometry.

C. List the student learning outcomes for the course.

By the end of the course, students will be able to
(1) Build new mathematical knowledge through problem solving

(2) Select and use various types of reasoning
(3) Communicate mathematical and computational thinking coherently and clearly to peers and professors
(4) Understand how mathematical ideas interconnect and build on one another to produce a coherent whole;
(5) Use multiple representations to model and interpret physical and mathematical phenomena.
(6) Use techniques of linear and geometric algebra to study problems in the overlap between geometry and algebra

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

(1) Build new mathematical knowledge through problem solving--students will complete objective homework assignments and examinations;
(2) Select and use various types of reasoning; -- students will complete objective homework assignments and examinations;
(3) Communicate mathematical and computational thinking coherently and clearly to peers and professors--students will complete objective homework assignments and examinations;
(4) Understand how mathematical ideas interconnect and build on one another to produce a coherent whole--students will complete objective homework assignments and examinations;
(5) Use multiple representations to model and interpret physical and mathematical phenomena--students will complete objective homework assignments and examinations;
(6) Use techniques of linear and geometric algebra to study problems in the overlap between geometry and algebra--students will complete objective homework assignments and examinations;

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

1. Analyze and solve problems in the areas of algebra, analysis, statistics and geometry. The student should be able to work individually and as a member of a team. Depending on the program emphasis, the student should possess the concept comprehension skills mentioned above at a sufficient level of expertise to function successfully as a teacher of mathematics, as a contributing member in business or industry, or as a graduate student pursuing an advanced degree in mathematics or statistics. -- Students will analyze and solve problems in algebra, analysis, and geometry, both individually and through small group work. The homework and examinations provide students the skills at a sufficient level of expertise to function successfully as a teacher of mathematics, a contributing member in business or industry, or as a grduate student pursuing an advanced degree.
2. Use technology as an aid in the solution of problems. Specifically, the student should be able to write and effectively use programs for computers and graphing calculators. -- During this course, students will gain valuable experience solving certain homework exercises with the use of both computer programs and graphing calculators.
3. Develop appropriate learning skills to foster the investigation of mathematical ideas and direct his/her own learning. -- Students will practice mathematical skills on homework assignments to foster the investigation of mathematical ideas. -- On examinations, students will practice these skills and also synthesize new mathematical knowledge by combining ideas and applying them to new exercises. Some of these exercises are inquiry-based or open-ended and therefore appropriate for students fostering the skills to direct their own learning.
4. Communicate the mathematical ideas learned in the program to others. This ability should exist in both written and oral forms of communication. -- Students will complete exercises on homework and examinations that demonstrate their ability to communicate mathematical ideas in written form. As a portion of their participation grade, students will present mathematical ideas to their peers and instructor in-class in oral form.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

(1) Build new mathematical knowledge through problem solving; -- In achieving this objective, students will be educated for success in a global environment as well as engage in scholarship and foster innovation and creative thinking
(2) Select and use various types of reasoning -- In achieving this objective, students will foster their innovation and creative thinking, as well as be educated for success in a global environment
(3) Communicate mathematical and computational thinking coherently and clearly to peers and professors -- In achieving this objective, students will foster collaboration and will engage in scholarship
(4) Understand how mathematical ideas interconnect and build on one another to produce a coherent whole--In achieving this objective, students will foster their creative thinking
(5) Use multiple representations to model and interpret physical and mathematical phenomena--In achieving this objective, students will be educated for success in a global environment, engage in scholarship, and foster innovation and creative thinking.
(6) Use techniques of linear and geometric algebra to study problems in the overlap between geometry and algebra--In achieving this objective, students will be educated for success in a global environment, engage in scholarship, and foster innovation and creative thinking

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.
None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to

which the course duplicates or overlaps and provide justification for the duplication or overlap.

The first material in this course (the first three weeks) has overlap with MATH 301. The duplication/overlap is because this course builds on the knowledge and skills developed in MATH 301. A student in the proposed course would either (i) have instructor permission to enroll in the course and therefore see this reviewed material for the first time, or would (ii) benefit from this overlap with the prerquisite as a brief review of relevant knowledge.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Department of Mathematics would offer this course as an elective.

Department of Physics, Earth Science, and Space Systems Engineering may offer this course as an elective for the following programs:

Physics Area (Computational Physics Track) - Bachelor of Science (MATH elective approved by advisor)

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Eric Jerde, Chair of Department of Physics, Earth Science, and Space Systems Engineering -- contacted by e-mail

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Robin Blankenship, Ph.D., Associate Professor of Mathematics
Doug Chatham, Ph.D., Associate Professor of Mathematics
Vivian Cyrus, Ph.D., Professor of Mathematics
Michael Dobranski, Ph.D., Associate Professor of Mathematics
Lloyd Jaisingh, Ph.D., Professor of Mathematics
Kathy Lewis, Ph.D., Associate Professor of Mathematics
Rus May, Ph.D., Associate Professor of Mathematics
Tim O'Brien, Ph.D., Associate Professor of Mathematics
Joshua Qualls, Ph.D., Assistant Professor of Mathematical Physics
Randy Ross, Ph.D., Associate Professor of Mathematics
Chris Schroeder, Ph.D., Department Chair and Professor of Mathematics

B. Identify external adjunct faculty, if appropriate.

N/A

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

It is anticipated that the course would begin with one section of approximately 10 to 15 students. As interest grows, the size and number of sections would expand accordingly.

B. Desired implementation date for the course.

It is intended that this course be offered for the first time in Fall 2021.

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

This course will be taught by lecture.

D. Additional facilities and special equipment needs for this course, if any.

Current facilities and equipment are sufficient.

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Dept. of Mathematics
MATH 311: GEOMETRIC ALGEBRA
Fall 2020

Instructor: Dr. Joshua Qualls. **Office/Phone**: Lappin 204E / 606 783 2930

Office Hrs: TBD (or by email) **Email**: jqualls@moreheadstate.edu

Textbook: "Linear and Geometric Algebra" by Alan Macdonald (ISBN-13: 978-1453854938)

Catalog Description: MATH 311. Geometric Algebra. (3-0-3). This course is designed as an introduction to linear and geometric algebra. Linear algebra topics include vectors, vector spaces, matrices, inner and outer products, eigenvectors, and linear transformations. Extending these ideas to higher-dimensional objects gives geometric algebra; topics include oriented areas and volumes, multivectors, the geometric product, blades, complex numbers and quaternions, the exterior product, and an introduction to other algebras. Prerequisites: MATH175, and either MATH301 or instructor permission.

Student Learner Outcomes: By the end of the course, students will be able to

(1) Build new mathematical knowledge through problem solving;

(2) Select and use various types of reasoning;

(3) Communicate mathematical and computational thinking coherently and clearly to peers and professors;

(4) Understand how mathematical ideas interconnect and build on one another to produce a coherent whole;

(5) Use multiple representations to model and interpret physical and mathematical phenomena;

(6) Use techniques of linear and geometric algebra to study problems in the overlap between geometry and algebra;

Each of these student learner outcomes will be assessed through a combination of homework assignments and objective examinations comprising computational and conceptual exercises.

Attendance: All excused absences will be handled in accordance with UAR 131.03. The student is expected to attend every meeting, to be there on time, and to stay for the entire meeting. An unexcused absence will result in a score of zero for that day's quiz score.

Assessments: Readings and homework problems will be assigned from the textbook. Students will attend lectures prepared to discuss their reading/questions. Class will begin with a graded quiz over reading. The instructor will then answer questions and lecture on new topics. There will be three exams throughout the semester (see the schedule) and a cumulative final exam all graded for correctness. Near the end of the course, you will be assigned a project described below.

Final Project: Starting in mid-October, you will choose a project topic from a list (including the Cauchy-Riemann equations, Maxwell's equations, rotational motion, Lorentz invariance, conformal geometric algebra, Haskell/computer modeling, etc.). One half of the project grade depends on your written answers to provided questions; the other half of your grade depends on presenting the information you have learned (either in a brief presentation, a written summary, a computer program, etc.).

Grade Distribution: 20% Homeworks 3 x 15% Exams 9% Final Project
8% Reading Quizzes 18% Final Exam

Grade Scale: **A 90 to 100%** **B 80 to < 90%** **C 70 to < 80%**

D 60 to < 70% **E < 60%**

Schedule: The schedule is subject to change. Please see the website for up to date reading assignments, notes, and modifications.

Week 1	Vectors, Vector Spaces
Week 2	Vector Spaces, Matrices
Week 3	Matrices
Week 4	Matrices, Inner Product Spaces
	EXAM 1
Week 5	Linear Transformations
Week 6	Determinants, Adjoints, Matrix Representations
Week 7	Matrix Representations, Eigenvectors/Eigenvalues
Week 8	Eigenspaces, Invariant Subspaces
	EXAM 2
Week 9	Symmetric, Orthogonal, Skew Transformations
Week 10	Oriented Areas, Oriented Solids, G^3
Week 11	BREAK
Week 12	Complex Numbers, Rotations in R^3
Week 13	G^n, The Dual, Product Properties
	EXAM 3
Week 14	Projections, Rotations, Reflections
Week 15	Outermorphisms, Catching up
Week 16	Catching up, Conformal Model

Campus Safety Statement: Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

Academic honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA): Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	MATH 320 Codes and Cryptography
Department (as listed in current catalog)	Mathematics
College (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUIK (X) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) Date

Wayne Miller (X) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch (X) Approved ( ) Disapproved 12/1/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	MATH 320 Codes and Cryptography
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The course title, department, and college names correspond to the current catalog.	☒
☒	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☒
☒	Responses are complete and applicable for each question.	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Josh Qualls — 4/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 9/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
Minor Revision to an Existing Course

Use this outline to report a minor modification of a previously approved course and to equate a *current* course with a new course. Minor revisions include title, prefix, course number, catalog course description, and admission requirements (test scores, pre-requisites, or co-requisites). ***Minor changes do not modify course content or the course formula.*** If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

I. COURSE

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Faculty Load	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
Current Course Name: (as listed in the current catalog)	MATH	320	Codes and Cryptography	3	3-0-3	Spring
Proposed Course Name:	MATH	320	Information Theory and Codes	3	3-0-3	Fall

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

I would like to modify the title and course description in the MSU Undergraduate Catalog to more accurately describe the material and content in the course.

B. List all other departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Department of Mathematics would offer this course as an elective for the following programs:

Mathematics Major (General Track) - Bachelor of Science
Mathematics Area (MSUTeach Track) - Bachelor of Science
Mathematics Area (Computational Track) - Bachelor of Science
Mathematics Minor

Department of Physics, Earth Science, and Space Systems Engineering may offer this course as an elective for the following programs;

Physics Area (Computational Physics Track) - Bachelor of Science (MATH elective approved by advisor).

C. Explain the potential impact on the other departments and programs.

This is an upper-level mathematics course. The Department of Physics, Earth Science, and Space Systems Engineering may offer this course as an elective for the following programs; Physics Area (Computational Physics Track) - Bachelor of Science (MATH elective approved by advisor). In addtion, this course is required for the Computer Science Area of Concentration - Computer and Networking Security Track.

D. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

Eric Jerde, Chair of Department of Physics, Earth Science, and Space Systems Engineering -- contacted by e-mail. Ahmad Zargari, Associate Dean of the School of Engineering and Computer Science and Sherif Rashad, Professor of Computer Science -- contacted by email.

III. ADDITIONAL INFORMATION

A. If this is a change that effects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

MATH 320. Information Theory and Codes. (3-0-3) Fall. This course is designed as an introduction to information theory and coding theory. Topics include entropy, channel capacity, Shannon's Theorems, error-detecting and error correcting codes, maximum likelihood decoding, and an introduction to cryptography as time allows, including topics such as symmetric and public-key encryption, secrecy, security, and cryptographic protocols. Specific applications of the material will be emphasized throughout the course. Prerequisites: MATH 301

Curriculum Proposal Review Worksheet - New or Changing Academic Programs

Issues to consider	Has the proposal satisfied the requirements?	Comments
The coursework is college-level		
The program's CIP code is appropriate		
The program design promotes a depth of student learning		
The program design promotes a breadth of student learning		
The program design fosters the integration of knowledge		
The program design fosters the development of the skills of analysis and inquiry		
The coursework in the program is appropriate for the degree level (e.g., associate's, baccalaureate, master's, specialist, doctorate)		
The mode of delivery is clearly stated and does not negatively impact the program design or attainment of student learning outcomes		
The program length is appropriate (see UAR 143)		
The program fits with the institution's mission and goals		
The program has clearly articulated student learning outcomes (see UAR 109)		
The program assessment plan for the program-level SLOs is appropriate to determine attainment		
The program has clearly identified the core and elective courses required, and how those courses will be sequenced		
The core of the program comprises 50% of its hours		
The program design involves sequencing that compels an increasing level of knowledge/skill development as a student progresses through the curriculum		
If applicable, the admission, retention, and completions standards are appropriate		
The resources needed to deliver the program are reasonable and available		
Additional Issues for Graduate Programs Only		
If a graduate program, the coursework demonstrates more rigor and higher-order learning than an undergraduate program, as demonstrated via the proposal and syllabus/outcomes.		
The curriculum requirements foster a command of the literature of the discipline		
The curriculum design and requirements compel the development of independent research skills and/or skills that will be used in practice in the profession		

Curriculum Proposal Review Worksheet - New or Changing Course MATH 320

Issues to consider	Has the proposal satisfied the requirements?	Comments
The scope and description of the course has been articulated clearly, and (if applicable) matches to the description of any equated course.	✓	
The course level has been described and justified as outlined in UAR 102	✓	
The need for the course has been justified	✓	
The skills and knowledge to be obtained (e.g., student learning outcomes) have been clearly described	✓	
The assessment of course-level student learning outcomes has been clearly defined and is appropriate	✓	
The course's relevance and tie to the University's mission has been articulated and is appropriate	✓	
The course syllabus conforms exactly to the syllabus checklist	✓	
(If applicable) The prerequisites or corequisites and/or course equations are clear and appropriate	✓	
The resources needed to deliver the course are reasonable and available	✓	
Additional Issues for Graduate Courses Only		
The proposal clearly details course rigor at the appropriate level (note: graduate courses must be more rigorous in nature than undergraduate courses)		
The course is designed well to promote higher-order learning (as compared to the level of learning appropriate for an undergraduate course)		
The course design promotes the development of independent research and/or professional practice skills		

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	MATH 360 Tensors/Differential Geometry
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (✓) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GRUPE (✓) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER (✓) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Conch (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	MATH 360 Tensors/Differential Geometry
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☒	If an Information Technology signature is required, it has been obtained.	☒
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☒	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The course description EXACTLY matches the course description stated in the syllabus.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☒
☒	Responses are complete and applicable for each question.	☒
☒	If the course requires the use of live animals, the IACUC form is attached.	☒
☒	The syllabus starts on a separate page.	☒
☒	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☒
☒	The syllabus contains the course title and course number (exactly as listed in the proposal).	☒
☒	The syllabus contains the academic term with date.	☒
☒	The syllabus contains the instructor's name.	☒
☒	The syllabus contains the office location.	☒

☒	The syllabus contains the instructor's office phone number and office hours schedule.
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.
☒	The syllabus contains a grading description and distribution (please be very specific).
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.01).
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.
☒	The entire proposal is saved as one Word document.

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Josh Qualls — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

Course Name (as listed in the current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	360	Tensors/Differential Geometry	3-0-3	3	Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Mathematics Major (General Track) – Bachelor of Science
Mathematics Area (MSUTeach Track) – Bachelor of Science
Mathematics Minor
Physics Area (Computational Physics Track) - Bachelor of Science

This is a ☐ **required course. This is an** ☒ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

MATH 360. Tensors /Differential Geometry. (3-0-3). This course is designed as a bridge between vector calculus and differential geometry. Topics include curves and surfaces, extrinsic curvature, manifolds, tensors, exterior algebra, metrics, covariant derivatives, connections, intrinsic curvature, and the Riemann tensor. Additional topics include the Euler characteristic, Lie groups, electromagnetism, and general relativity as time allows. Prerequisites: MATH276 and either MATH301 or MATH310.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

This course is intended to provide the necessary mathematical foundations for understanding differential geometry. Students in Mathematics will see topics from several areas of mathematics unify and be applied toward geometric ideas having applications in physics, chemistry, economics, geology, and more. The contents of this course are not currently being offered by any course in the catalog despite being important in both graduate school and contemporary mathematical research.

B. Justify the proposed instructional level (100-600) or instructional level change.

This course is intended for students who have completed at least two years of study at the university. Intellectual depth and mathematical maturity are required to master the mathematics of differential geometry even at this introductory level. The course uses techniques from multivariable calculus and linear algebra to study problems in geometry, so both of those courses are necessary prerequisites.

C. List the student learning outcomes for the course.

By the end of the course, students will be able to
(1) Build new mathematical knowledge through problem solving -- assessed through mathematical and conceptual exercises on homework assignments and objective examinations

(2) Select and use various types of reasoning -- assessed through mathematical and conceptual exercises on homework assignments and objective examinations
(3) Communicate mathematical and computational thinking coherently and clearly to peers and professors
(4) Understand how mathematical ideas interconnect and build on one another to produce a coherent whole;
(5) Use multiple representations to model and interpret physical and mathematical phenomena.
(6) Use techniques of calculus and algebra to study problems in geometry

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

(1) Build new mathematical knowledge through problem solving--students will complete objective homework assignments and examinations;
(2) Select and use various types of reasoning; -- students will complete objective homework assignments and examinations;
(3) Communicate mathematical and computational thinking coherently and clearly to peers and professors--students will complete objective homework assignments and examinations;
(4) Understand how mathematical ideas interconnect and build on one another to produce a coherent whole--students will complete objective homework assignments and examinations;
(5) Use multiple representations to model and interpret physical and mathematical phenomena--students will complete objective homework assignments and examinations;
(6) Use techniques of calculus and algebra to study problems in geometry--students will complete objective homework assignments and examinations;

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

1. Analyze and solve problems in the areas of algebra, analysis, statistics and geometry. The student should be able to work individually and as a member of a team. Depending on the program emphasis, the student should possess the concept comprehension skills mentioned above at a sufficient level of expertise to function successfully as a teacher of mathematics, as a contributing member in business or industry, or as a graduate student pursuing an advanced degree in mathematics or statistics. -- Students will analyze and solve problems in algebra, analysis, and geometry, both individually and through small group work. The homework and examinations provide students the skills at a sufficient level of expertise to function successfully as a teacher of mathematics, a contributing member in business or industry, or as a grduate student pursuing an advanced degree.
2. Use technology as an aid in the solution of problems. Specifically, the student should be able to write and effectively use programs for computers and graphing calculators. -- During this course, students will gain valuable experience solving certain homework exercises with the use of both computer programs and graphing calculators.
3. Develop appropriate learning skills to foster the investigation of mathematical ideas and direct his/her own learning. -- Students will practice mathematical skills on homework assignments to foster the investigation of mathematical ideas. -- On examinations, students will practice these skills and also synthesize new mathematical knowledge by combining ideas and applying them to new exercises. Some of these exercises are inquiry-based or open-ended and therefore appropriate for students fostering the skills to direct their own learning.
4. Communicate the mathematical ideas learned in the program to others. This ability should exist in both written and oral forms of communication. -- Students will complete exercises on homework and examinations that demonstrate their ability to communicate mathematical ideas in written form. As a portion of their participation grade, students will present mathematical ideas to their peers and instructor in-class in oral form.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

(1) Build new mathematical knowledge through problem solving; -- In achieving this objective, students will be educated for success in a global environment as well as engage in scholarship and foster innovation and creative thinking
(2) Select and use various types of reasoning -- In achieving this objective, students will foster their innovation and creative thinking, as well as be educated for success in a global environment
(3) Communicate mathematical and computational thinking coherently and clearly to peers and professors -- In achieving this objective, students will foster collaboration and will engage in scholarship
(4) Understand how mathematical ideas interconnect and build on one another to produce a coherent whole--In achieving this objective, students will foster their creative thinking
(5) Use multiple representations to model and interpret physical and mathematical phenomena--In achieving this objective, students will be educated for success in a global environment, engage in scholarship, and foster innovation and creative thinking.
(6) Use techniques of calculus and algebra to study problems in geometry--In achieving this objective, students will be educated for success in a global environment, engage in scholarship, and foster innovation and creative thinking

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.
None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

The material in this course is not currently covered at this depth in any other course. Some other courses include discussion of vectors and matrices, the proposed course is the only course that puts these objects into a broader mathematical context. Some other courses include calculus, but the proposed course is the only course that introduces the ideas of differentiability and integrability on curved manifolds.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Department of Mathematics would offer this course as an elective.
Department of Physics, Earth Science, and Space Systems Engineering may offer this course as an elective for the following programs;
Physics Area (Computational Physics Track) - Bachelor of Science (MATH elective approved by advisor)

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Eric Jerde, Chair of Department of Physics, Earth Science, and Space Systems Engineering -- contacted by e-mail

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Robin Blankenship, Ph.D., Associate Professor of Mathematics
Doug Chatham, Ph.D., Associate Professor of Mathematics
Vivian Cyrus, Ph.D., Professor of Mathematics
Michael Dobranski, Ph.D., Associate Professor of Mathematics
Lloyd Jaisingh, Ph.D., Professor of Mathematics
Kathy Lewis, Ph.D., Associate Professor of Mathematics
Rus May, Ph.D., Associate Professor of Mathematics
Tim O'Brien, Ph.D., Associate Professor of Mathematics
Joshua Qualls, Ph.D., Assistant Professor of Mathematical Physics
Randy Ross, Ph.D., Associate Professor of Mathematics
Chris Schroeder, Ph.D., Department Chair and Professor of Mathematics

B. Identify external adjunct faculty, if appropriate.

N/A

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

It is anticipated that the course would begin with one section of approximately 10 to 15 students. As interest grows, the size and number of sections would expand accordingly.

B. Desired implementation date for the course.

It is intended that this course will be offered for the first time in Spring 2021.

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

This course will be taught by lecture.

D. Additional facilities and special equipment needs for this course, if any.

Current facilities and equipment are sufficient.

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**

- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Dept. of Mathematics
MATH 360: TENSORS/DIFFERENTIAL GEOMETRY
Spring 2021

Instructor: Dr. Joshua Qualls. **Office/Phone**: Lappin 204E / 606 783 2930

Office Hrs: TBD (or by email) **Email**: jqualls@moreheadstate.edu

Textbook: "Differential Geometry of Manifolds" by S. Lovett (ISBN-13:978-1568814575) (not required)

Catalog Description: MATH 360. Tensors /Differential Geometry. (3-0-3). This course is designed as a bridge between vector calculus and differential geometry. Topics include curves and surfaces, extrinsic curvature, manifolds, tensors, exterior algebra, metrics, covariant derivatives, connections, intrinsic curvature, and the Riemann tensor. Additional topics include the Euler characteristic, Lie groups, electromagnetism, and general relativity as time allows. Prerequisites: MATH276 and either MATH301 or MATH310.

Student Learner Outcomes/Objectives: By the end of the course, students will be able to

(1) Build new mathematical knowledge through problem solving;
(2) Select and use various types of reasoning;
(3) Communicate mathematical and computational thinking coherently and clearly to peers and professors;
(4) Understand how mathematical ideas interconnect and build on one another to produce a coherent whole;
(5) Use multiple representations to model and interpret physical and mathematical phenomena;
(6) Use techniques of calculus and algebra to study problems in geometry;

Each of these student learner outcomes will be assessed through a combination of homework assignments and objective examinations comprising computational and conceptual exercises.

Attendance: All excused absences will be handled in accordance with UAR 131.03. The student is expected to attend every meeting, to be there on time, and to stay for the entire meeting. An unexcused absence will result in a score of zero for that day's quiz score.

Assessments: Readings and homework problems will be assigned from the textbook. Students will attend lectures prepared to discuss their reading/questions. In class, the instructor will answer questions and lecture on new topics. There will be two exams throughout the semester (see the schedule) and a cumulative final exam all graded for correctness.

Grade Distribution: 32% Homework 2 x 16% Exams
6% Participation 30% Final Exam

Grade Scale:	**A**	**90 to 100%**	**B**	**80 to < 90%**	**C**	**70 to < 80%**
	D	**60 to < 70%**	**E**	**< 60%**		

Schedule: The schedule is subject to change. Please see the website for up to date reading assignments, notes, and modifications.

Week 1	Vector Calculus Review
Week 2	Review, Surfaces
Week 3	Surfaces, Curvature
Week 4	Manifolds
Week 5	Manifolds
Week 6	Exam 1, Vectors and Covectors
Week 7	Duality, Tensor algebra
Week 8	Tensor algebra
Week 9	Vector bundles/fields and tensor fields on manifolds
Week 10	Tensor calculus
Week 11	BREAK
Week 12	Tensor calculus, Exam 2
Week 13	Metrics
Week 14	Covariant derivatives
Week 15	Connections, Riemannian curvature
Week 16	Curvature, Applications

Campus Safety Statement: Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.
Academic honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.
Americans with Disabilities Act (ADA): Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	MATH ~~380~~: Mathematics in Business, Industry, and Government 385
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GROPE (X) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) Date

Wayne Miller (X) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(X) Approved ( ) Disapproved 1-26-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	MATH 380: Mathematics in Business, Industry, and Government
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	If an Information Technology signature is required, it has been obtained.	☒
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The course title, department, and college names correspond to the current catalog.	☒
☒	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The course description EXACTLY matches the course description stated in the syllabus.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☒
☒	Responses are complete and applicable for each question.	☒
☒	If the course requires the use of live animals, the IACUC form is attached.	☒
☒	The syllabus starts on a separate page.	☒
☒	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☒
☒	The syllabus contains the course title and course number (exactly as listed in the proposal).	☒
☒	The syllabus contains the academic term with date.	☒
☒	The syllabus contains the instructor's name.	☒
☒	The syllabus contains the office location.	☒

☒	The syllabus contains the instructor's office phone number and office hours schedule.	☒
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☒
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☒
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☒
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☒
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☒
☒	The syllabus contains a grading description and distribution (please be very specific).	☒
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☒
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☒
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☒
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

D. Michael Dolan 11/1/19

Originator (Sign and Print) Approval Date

D. Michael Dolan 11/1/19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ New Course ☐ Revised Course

Course Name (as listed in the current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	MATH	385	Mathematics in Business, Industry, and Government	3-0-3	3 hours	Fall/Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Mathematics Area, Mathematics Major

This is a ☒ required course. This is an ☒ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

MATH 385. Mathematics in Business, Industry, and Government. (3-0-3) Fall and Spring. Prepares mathematics and science students for careers in business, industry, government, and other organizations by engaging them in research problems that come directly from these entities. Course may be taken twice for credit.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

We have offered this course as MATH 476 as part of participation in the NSF-funded MAA project PIC Math. We want to list the course in future course catalogs and be able to require the course in the Mathematics Area, Data Analytics Track. We also want to allow students to take the course for credit up to two times to allow for large projects which cannot be completed in one semester or for students to work on different types of projects as their mathematical interests change.

B. Justify the proposed instructional level (100-600) or instructional level change.

The course requires students to apply their previous experiences in school and the rest of their lives, and in mathematics courses as well as other courses. Students must take charge of determining what they need to learn and how they will learn it, including seeking help from people other than the course instructor. Simultaneously, there are no specific prerequisites for the course, since students with diverse backgrounds can contribute to the work of the student teams.

C. List the student learning outcomes for the course.

This course aims to:

- increase awareness among mathematical sciences faculty and undergraduates about non-academic career options;
- provide research experience working on real problems from business, industry and government; and
- prepare students for industrial careers.

A strong component of Mathematics in Business, Industry, and Government involves students working as a group on a semester-

long undergraduate research problem from business, industry, or government. Undergraduate research is a high impact teaching and learning practice and has been shown to improve students' abilities in:

- problem solving;
- critical thinking;
- independent thinking; and
- communicating.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

Students communicate with clients weekly through email and every 3 - 5 weeks through conferencing applications, such as WebEx or Skype. Students regularly submit written progress reports in Blackboard. At the end of the semester, students make formal presentations to clients using conferencing software and/or by recorded video, as well as submitting the final project products to the client and the Blackboard course. All tasks are scored by rubric.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

The student exiting the programs in the mathematical sciences will:

1. Analyze and solve problems in the areas of algebra, analysis, statistics and geometry. The student should be able to work individually and as a member of a team. Depending on the program emphasis, the student should possess the concept comprehension skills mentioned above at a sufficient level of expertise to function successfully as a teacher of mathematics, as a contributing member in business or industry, or as a graduate student pursuing an advanced degree in mathematics or statistics. In this course, students work in teams to solve problems from business, industry, and government (BIG).

2. Use technology as an aid in the solution of problems. Specifically, the student should be able to write and effectively use programs for computers and graphing calculators. Most of the problems from BIG require the use of technology in the form of statistical analysis, data mining, machine learning, spreadsheet analysis, computer programming, or other use of computer algebra or geometry.

3. Develop appropriate learning skills to foster the investigation of mathematical ideas and direct his/her own learning. Students in the course must go beyond their classroom experiences to determine what knowledge and skills they will need to tackle the problem, then determine how they will acquire the required knowledge and skills.

4. Communicate the mathematical ideas learned in the program to others. This ability should exist in both written and oral forms of communication. Students in the course will communicate with clients regularly through email and via conferencing software. Students will submit regular reports as well as a formal final report for the course and for the client.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

As a community of lifelong learners, we will:

Educate students for success in a global environment;--Students experience real-world work and problems of mathematicians outside academia.

Engage in scholarship;--Students practice the skills of lifelong learners outside the typical classroom.

Promote diversity of people and ideas;--Students work with business, industry, government, and organizations which represent and work with diverse communities and cultures.

Foster innovation, collaboration and creative thinking; and--Students collaborate to attempt to use mathematics in novel ways to solve problems.

Serve our communities to improve the quality of life.--Students work with businesses, industries, local government agencies, and non-profit organizations to try to help them solve problems to serve their employees, customers, and clients more effectively.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None.

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

There are no similar courses which are aimed at using mathematics in business, industry, government, and organizations.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

a. requires the course

b. offers the course as an elective

c. offers a similar course
d. has an equated course
e. has the course listed as a co-requisite or pre-requisite
f. shares staff and/or resources

The Mathematics Area - Data Analytics Track will require two semesters of the course. The course will be accepted as an upper division mathematics elective for all other mathematics programs.

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

None.

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

Robin Blankenship, Ph.D., Associate Professor of Mathematics
Doug Chatham, Ph.D., Associate Professor of Mathematics
Vivian Cyrus, Ph.D., Professor of Mathematics
Michael Dobranski, Ph.D., Associate Professor of Mathematics
Lloyd Jaisingh, Ph.D., Professor of Mathematics
Kathy Lewis, Ph.D., Associate Professor of Mathematics
Rus May, Ph.D., Associate Professor of Mathematics
Tim O'Brien, Ph.D., Associate Professor of Mathematics
Randy Ross, M.A., Associate Professor of Mathematics
Chris Schroeder, Ph.D., Professor of Mathematics

B. Identify external adjunct faculty, if appropriate.

None.

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

12 students per section. 24 students per year.

B. Desired implementation date for the course.

Fall 2020.

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

Face-to-face with students working in small group teams.

D. Additional facilities and special equipment needs for this course, if any.

None.

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☒ **Yes** ☐ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual**

packages in labs, only server-based versions).

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

MOREHEAD STATE UNIVERSITY
COLLEGE OF SCIENCE
DEPARTMENT OF MATHEMATICS
MATH 385–001
MATHEMATICS IN BUSINESS, INDUSTRY, AND GOVERNMENT
107 LAPPIN HALL, TTH, 09:30AM – 10:45AM
FALL 2020

Instructor: Michael Dobranski
Email: m.dobranski@moreheadstate.edu
Office: 202D Lappin Hall
Office Phone: 1–606–783–5171
Office Hours: 01:00PM – 01:50PM, MTWThF; and by appointment.

REQUIRED TEXTBOOK
There is no required textbook for this course. You will locate and use library and online resources as needed in order to work on the problem you choose for your project.

TECHNOLOGY REQUIREMENTS
The syllabus and course assignments will be posted in our Blackboard course site. It is likely that you will use one or more software applications to complete the work on the project you choose. I will help you in learning how to use software when needed and to the extent that I am able, but you will ultimately be responsible for determining how to use the specific software that you select.

COURSE DESCRIPTION
MATH 385. Mathematics in Business, Industry, and Government. (3-0-3) Fall and Spring.
Prepares mathematics and science students for careers in business, industry, government, and other organizations by engaging them in research problems that come directly from these entities. Course may be taken twice for credit.

COURSE LEARNING OBJECTIVES
This course aims to:

- increase awareness among mathematical sciences faculty and undergraduates about non-academic career options;
- provide research experience working on real problems from business, industry and government; and
- prepare students for industrial careers.

A strong component of BIG Math involves students working as a group on a semester-long undergraduate research problem from business, industry, or government. Undergraduate research is a high impact teaching and learning practice and has been shown to improve students' abilities in:

- problem solving;
- critical thinking;
- independent thinking; and
- communicating.

COURSE GRADING AND TENTATIVE CALENDAR:
Grading will tentatively be based on the tasks that need to be carried out to complete a project. The weekly components are not meant to be set in stone; tasks may cross into other weeks.

Calendar	Project Components	Grade Percentage

Weeks 1 – 2	Background and secondary research on clients, data and research question. Focus on software tools we will need.	5%
Weeks 3 – 4	In depth look at research questions, data, meeting the clients, and selection of project teams.	5%
Weeks 4 – 5	Project team work begins. Preliminary data/strategy exploration, development of solution strategy proposal and management timeline.	10%
Weeks 6 – 10	In depth analysis, project work, weekly status reports to class. Continuing status presentations to clients.	50%
Weeks 11 – 12	Preliminary report and assessment of business value of project work. Continued work on finalizing project.	10%
Weeks 13 – 14	In-house preparation/practice of final presentations, written reports and extensions of work.	10%
Weeks 15 – 16	Formal presentations to clients. Submission of final project products. Self and peer evaluations.	10%

The grade scale will be

90.00% – 100.00%	A
80.00% – 89.99%	B
70.00% – 79.99%	C
60.00% – 69.99%	D
0.00% – 59.99%	E

RULES OF CLIENT ENGAGEMENT

- Project Teams must direct all communication to client contacts through the course instructor, i.e. no direct contact with clients without approval of email messages. Generally, we will email the clients once per week.
- Meetings with clients either in person or through teleconference require respectful business casual dress.
- All presentations to clients must be approved prior to presentation. Don't get caught late in the game and be in a position where YOU have to tell the client you aren't prepared.
- Deadlines are deadlines. In order to complete a project within the scope of this semester we will need to attend to a consistent work ethic that includes significant time OUTSIDE of class.

UNIVERSITY POLICIES

Americans with Disabilities Act (ADA)

Students with disabilities are entitled to academic accommodations and services to support their access and safety. The Office for Disability Services in 109–J Enrollment Services Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606−783−5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.

Campus Safety Statement

Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency

evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

Academic Honesty
All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Additional information may be found at http://moreheadstate.smartcatalogiq.com/en/2016-2017/Undergraduate-Catalog/Administrative-Policies-and-Procedures.

COURSE POLICIES
This course will require reading and working problems. Mathematics is best learned through a combination of individual endeavor and group interaction. Develop the habit of always attempting reading and exercises on your own first, then checking your results and your understanding with others.

Instructor's Responsibilities
It is my responsibility as your instructor to guide you in your learning, to make myself available for questions, to give you feedback on your work, and to assist you in any reasonable way. If you don't find me in my office, contact me via email or phone—email is preferred—and we'll schedule an appointment for a time when we're both available.

Student's Responsibilities
As a university student, it is your responsibility to learn. You are expected to have an interest in working cooperatively with your team to try to solve your client's problem and a willingness to invest the necessary time and effort to do so. You should expect to spend at least six (6) hours, probably more, outside of class each week on work for this class. Indicators of your effort will be your ability to clearly express ideas orally and in writing that document your attempts to tackle problems you may not have encountered previously. Do expect to struggle in your quest for understanding. Struggling and persevering is much more beneficial to you than watching someone else work. Mathematics and science are not subjects that you either get or don't get – everyone can learn mathematics and science if they demonstrate:

- a willingness to investigate;
- a willingness to experiment;
- a willingness to ask questions and seek help when needed; and
- a willingness to look on a mistake as a positive learning opportunity.

Attendance
I reserve the right to lower your grade if your attendance and/or participation fall well below expectations. I reserve the right to raise your grade for exceptional improvement/engagement in understanding throughout the semester. Please contact me if you have questions on grading.

Email Etiquette
I have three face-to-face classes and an online class, in addition to work with MSUTeach and Faculty Senate this semester, so the influx of email into my Inbox each day is abundant. To help me identify your email messages, please use "MATH 385−001 – purpose of email" as the subject of your course emails, for example: "MATH 385−001 – Syllabus Question" or "MATH 385−001 – Questions for Client." Additionally, please include your name in your emails. Don't assume that I will know who wrote the email from the email address. Finally, it is common courtesy to address the person you are writing at the beginning of your email, for example "Hi, Mike" or "Hello, Dr. D" or "Dear Dr. Dobranski." Your email in this class is professional correspondence, not chit-chat between family and friends. I attempt to respond by the next day to emails sent Sunday – Thursday,

so please don't expect to receive a reply within a few hours, much less a few minutes, after emailing me. Putting "IMPORTANT" or similar wording in the subject line of your email will not increase the speed of my reply. In order to concentrate on work, I only check email once, sometimes twice, per day.

SUCCESS

Success in this course, or any other course, will require that you follow through with the required activities and more. You must complete the tasks that you agree to complete for your group outside of class. You must attend meetings that your team schedules outside class time, unless your team knows that you will be unable to attend a meeting. During class, you should be willing to share your work, if called upon, and be ready to ask questions and to contribute to your team's and whole class discussions. The clients know that there is no guarantee that your teams will be able to solve their problems, but we owe it to them to give our best effort to their problems. Your success will depend on realistic industry evaluations of elements such as teamwork, communication, individual initiative, and final products.

Please keep in mind that this syllabus is tentative. In the event that I need to change part of the syllabus, I will give you plenty of time to adjust. The key to us having a good semester in this class is respect. I will show you the respect that you deserve, and you should show me and your classmates the respect that we deserve. If we all keep that in mind as we make our decisions, we'll all be able to accomplish our goals in this course.

Please insert (paste) any supporting documentation (email correspondence, IACUC form, etc.) here and remove this statement.

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form
Revised January 2019

Program: (as listed in current catalog)	Mathematics Area - Bachelor of Science
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GROPE (X) Approved ( ) Disapproved 2019/11/18

College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER (X) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) — Date

Chris Miller (X) Approved ( ) Disapproved 12/6/19

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch (X) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics Area - Bachelor of Science
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	Science

Helpful Information:

1. Important Definitions Used in the Curriculum Process
   - Area = a program of study comprised of at least 48 hours
   - Major = a program of study comprised of at least 30 hours, accompanied by a minor
   - Minor = a set of discipline-specific courses of at least 21 hours
   - Certificate = a series of courses related to a specific topic or skill with a prescribed number of hours. For additional information contact the Office of Academic Programs at 783-2003 or email undergraduate@moreheadstate.edu.
   - Core = a set of required courses taken by all students in a specific Area or Major
   - Track = a subset of courses within an area or major designed to develop expertise in a particular topic at the undergraduate level
   - Equated courses vs. cross-listed courses = equated courses are courses of identical content that have different prefixes (and are approved through the undergraduate curriculum process), whereas cross-listed courses have the same instructor and are offered at the same time/location.
   - Pre-requisite = course(s) that a student must successfully complete prior to registering for a more advanced course.
   - Co-requisite = course(s) that a student must take concurrently with another course.
2. An Associate's Degree normally requires at least 60 semester hours including 15 hours of prescribed general education credit.
3. A baccalaureate degree program at the undergraduate level is either an Area or a Major.
4. A program's total credit hours include program core (i.e., courses taken by all students in the program), program supplemental courses (other required hours), and program specific electives. No general education courses or free elective courses count toward total program hours.
5. Curriculum should be designed so that the program's total credit hours plus general education hours and free electives add up to 120 total hours, with 42 of the hours in upper division (i.e., 300- to 400-level) courses.
6. To ensure that students enrolled in a program have common experiences fifty percent (50%) of a program's total credit hours must be made up of core courses.
   Examples:
   a. If an Area is designed with 48 hours, then 24 or more of those hours must be in core courses. The rest of the program hours can be other program requirements that vary from student to student.
   b. If a Major is designed with 30 hours, then 15 or more of those hours must be in core courses. The remainder of the major hours can be other program supplemental courses and program specific electives that vary from student to student. The minor is not considered in calculations for this 50% rule.
   c. If a Major has 30 hours and includes tracks, the core must contain at least the same number (or

higher) of hours as the track. For example, a Major could have 15 hours in core, 9 hours in the track, and 6 hours as program electives.

7. Any proposal with a secondary education component must be routed through the Teacher Education Council.

8. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	If an Information Technology signature is required, it has been obtained.	☒
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The title, department, and college names correspond to the current catalog.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☒
☒	Responses are complete and applicable for each question.	☒
☒	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☒
☒	Each course has been reviewed for pre-requisites, co-requisites or testing requirements. There are no hidden pre-requisites, co-requisites, or testing requirements.	☒
☐	The program core contains at least 50% of the total program hours (not including general education and free elective hours) Not currently, but will w/ new Gen. Ed	☐
☒	The program core does not contain courses that should be listed in other sections of the proposal (i.e. Other Program Required Hours, Program Electives, etc.).	☒
☒	The program has an adequate number of area/major hours (minimum of 48 for area and minimum 30 for major).	☒
☒	The program has at least 42 upper division hours.	☒
☒	If the program is a major, hours are designated for an accompanying minor.	☒
	If the program has tracks, the total track hours do not exceed the total core hours.	
☒	The program has a maximum of 120 hours. If not, sufficient rationale is included in the proposal.	☒
☒	The curriculum maps each start on a separate page.	☒
☒	The curriculum map contains the official name of the program and track (if applicable).	☒
☒	The curriculum map contains accurate course prefix, number, and name for each course.	☒
☒	The curriculum map lists General Education courses in the first two years.	☒

☒	If the program has tracks, a separate curriculum map is included for each track.	☐
☒	The curriculum map contains EXACTLY the same courses and the same number of credit-hours as the proposal.	☒
☒	The curriculum map does not contain hidden pre-requisites or co-requisites.	☒
☒	The curriculum map codes are accurate.	☒
☒	If the program has tracks, a separate curriculum map is included for each track.	☒
☒	The total credit hours for each semester are acceptable (full-time, not overload, etc.).	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder / Mike Dobranski 11/1/19

Originator (Sign and Print) Approval Date

Josh Qualls 11/1/19

Department Curriculum Committee Chair (Sign and Print) Approval Date

PROGRAM
Major Revision of Existing Program

The outline below is to be used for program revisions. Each revised or new course included in this program requires a separate "New Course or Major Revision to Existing Course" proposal. *Note: an amended curriculum map must be attached to each "Major Revision of Existing Program" proposal.*

I. EXISTING PROGRAM REVISION

State the current title of the Program (as listed in the current catalog)

Mathematics Area - Bachelor of Science

List the degree (e.g. Bachelor of Science) and major or area (e.g. Math Major, Biology Area); as listed in the current catalog. Include tracks if applicable (e.g. Bachelor of Arts, Philosophy Major, Religious Studies Track).

Bachelor of Science; Mathematics Area; General Track, MSUTeach Track

State the proposed revised title of the Program (if applicable)

If the degree (e.g. Bachelor of Science) and/or major or area (e.g. Math Major, Biology Area) names are changing, please list them below. Include tracks if applicable.

Bachelor of Science; Mathematics Area; General Track, MSUTeach Track, MSUTeach Track with Computer Science, Data Analytics Track

CIP Code - ***Contact your department chair to verify the correct CIP Code information.***

27.0101 Mathematics, General

II. NEED AND JUSTIFICATON

A. Describe the changes and justify what this proposal is requesting; what are you doing and why are you doing it?

We want to add two tracks to the current Mathematics Area that 1) would allow a student to apply for certification to teach secondary mathematics and to apply for a Kentucky endorsement to teach secondary computer science, or 2) would lead to a career as a Data Scientist. We are also proposing to add MATH 175: Calculus I, MATH 499C: Capstone and Senior Thesis I, and MATH 499D: Capstone and Senior Thesis II into the Area of Concentration Core. This is to ensure that all tracks are in compliance with the so-called 50% rule. Moving these courses to the core will have no bearing on the courses that students in this program are required to take.

B. Program *coherence* refers to 1) appropriate sequencing of courses, not a mere bundling of credits, so that 2) student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Describe any impacts to coherence that the proposed revision to the program may have.

Computer Science is not a certificated field in Kentucky. Certification must be held in a certificated field before a person may apply for an endorsement to teach computer science. Track 3 (MSUTeach Track with Computer Science) consists of all coursework for the Mathematics Major, MSUTeach Track, and computer science coursework recommended by the Department of Computer Science. Track 4 (Data Analytics) consists of all coursework in the core for the Mathematics Area along with courses in statistics and computer science required to deal with the analysis of large data sets. Track 4 will focus on the mathematical and statistical underpinnings of analytics.

C. Have the admission requirements changed? If so, how?

No.

D. If a similar program at MSU or in Kentucky exists, provide justification for the duplication.

There is a program similar to Track 3 at Eastern Kentucky University. Very few students who major in computer science will become secondary teachers. Track 3 will allow any student seeking secondary mathematics certification who would also like to be able to teach computer science to earn that endorsement. It will not require any additional course creation and is within the current capacity of the Departments of Mathematics and Computer Science. While Data Analytics is a growing field, to our knowledge this would be the only program in Kentucky that includes this field as a part of the mathematics progam.

III. PURPOSE, GOALS, AND OBJECTIVES

A. What are the goals and objectives of this proposal? How do the proposed changes impact the program's alignment with the program's mission and goals, and/or the University's mission and goals?

The purpose of Track 3 is to allow for a mathematics and computer science teaching option within the Mathematics Area through compliance with the MSUTeach program. The purpose of Track 4 is to provide a program which prepares students in the growing area of data science with the mathematical and statistical skill and knowledge to understand and develop the techniques of the future.

B. State the revised program outcomes or competencies to be achieved by students.

The new tracks will produce higher quality mathematics and computer science teachers and graduates prepared for the growing field of data analytics.

C. How do the specific goals and objectives relate to the mission statement of the University?

In addition to preparing students to pursue their personal goals, this program is specifically intended to provide students with the necessary skills to apply mathematical techniques and concepts in industry, government, or other fields. Students in the proposed new tracks will innovate and collaborate in MSUTeach courses or in the PIC Math (or proposed BIG Math) course. In addition, students in all tracks will engage in scholarship through the capstone course.

D. List the methods of program assessment to be used other than course grades to ensure that the desired outcomes or competencies are attained by students. Indicate the frequency of assessment and how results will be made available to program faculty.

Existing methods of program assessment will continue to be in use. These include senior capstone and thesis, survey of graduates, exit interviews, and the Major Field Achievement Test, which is completed during the capstone course. These assessments are completed by each student who completes the program and are compiled and shared with the program faculty yearly.

E. List discipline-specific standards for accreditation in addition to Southern Association of Colleges and Schools (SACS) accreditation standards. If applicable, attach current statement of requirements.

Students in the MSUTeach Track must meet the certification and endorsement requirements of the EPSB.

IV. IMPACT

A. How will the program changes affect transfer students?

Transfer students will have additional options within the Mathematics Area.

B. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

a. offers required courses for this program
b. offers elective courses for this program
c. offers similar courses in their program
d. has an equated course
e. has courses in this proposal listed as a co-requisite or pre-requisite
f. shares staff and/or resources.

Departments and programs that offer required courses and equated courses are MSUTeach, Computer Science, and Physics.

C. Explain the potential impact on the other departments and programs.

The impact of the new tracks on other departments and programs will be increases in the demand for some of their courses.

D. List the individuals in the other departments and programs notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Ahmad Zargari, Sherif Rashad, Heba Elgazzar by email.

E. Does this program revision require new technology? Please note that Information Technology (GH 110) should be notified when the program proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** ☒ **No** **(If yes, a representative from Information Technology must sign the signature sheet.)**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server based license for the software. (IT does not install individual packages in labs, only server based versions).**

2. **the type of hardware to be utilized.**

V. PERSONNEL

A. List name(s), qualifications including highest earned degree, and academic rank(s) of departmental faculty who will teach courses in this program.

Robin Blankenship, Ph.D., Associate Professor of Mathematics
Doug Chatham, Ph.D., Associate Professor of Mathematics
Vivian Cyrus, Ph.D., Professor of Mathematics
Michael Dobranski, Ph.D., Associate Professor of Mathematics
Lloyd Jaisingh, Ph.D., Professor of Mathematics
Kathy Lewis, Ph.D., Associate Professor of Mathematics
Rus May, Ph.D., Associate Professor of Mathematics
Tim O'Brien, Ph.D., Associate Professor of Mathematics
Randy Ross, M.A., Associate Professor of Mathematics
Chris Schroeder, Ph.D., Professor of Mathematics

B. Identify external or adjunct faculty, if appropriate.

Dr. Edna O. Schack, Ed.D., Professor of Mathematics Education
Dr. David Long, Ph.D., Assistant Professor of Sciences and Science Education
Ms. Kendra Schroeder, Ed.S., Master Teacher
Ms. Diane Johnson, M.S., Master Teacher
Ms. Carol Neeper, M.Ed., Master Teacher
Dr. Geoff Gearner, Ph.D., Professor of Biology
Dr. Janelle Hare, Ph.D., Professor of Biology
Dr. Sean O'Keefe, Ph.D., Associate Professor of Biology
Jennifer Birriel, PhD, Professor of Physics
Robert Boram, PhD, Professor of Physics and Science Education
Wilson Gonzlez-Espada, PhD, Professor of Physics and Science Education
Sherif Rashad, Ph.D., Associate Professor of Computer Science
Heba Elgazzar, M.S., Instructor of Computer Science

C. List any additional support personnel (clerical, laboratory assistants, and technicians) needed for implementation.

None.

D. List additional faculty including academic rank and qualifications, who must be employed during the next four years if this is implemented.

None.

VI. ADDITIONAL INFORMATION

A. Identify the enrollment and number of graduates from this program for the past four years

There have been 74 enrolled as an Area of Concentration in Mathematics in the last four years; There have been 14 graduates in this program in the last four year.

B. List anticipated enrollment and number of graduates from this program for the next four years.

We anticipate the enrollment to increase to 100 over the next four years with the number of graduates increasing to 25.

C. Explain any additional or remodeled facilities that will be required.

None.

D. List any additional equipment required.

None.

E. Provide the estimated additional cost required to support this program for the next four years. Identify source of new funds (special legislative request, system reallocation, etc.).

None.

VII. PROPOSED PROGRAM REQUIREMENTS

Please use the following template to list all Program courses. To create additional lines, tab while cursor is in the last "Course Hours" field.

Example of different types of entries. Not all programs, minors or certificates will have each type of entry.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MSU	300	Name of course	3
MSU	400	Name of variable hour course	1-3
Variable		Free Electives	9

General Education

If the Program requires specific general education courses list them here. These courses should NOT have hours listed again in the Program requirements. (e.g. exchange courses, capstone, etc.) Remaining hours should be listed with "variable" as course prefix and "General Education" as course name with the total remaining general education hours in course hours.

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
ENG	100	Core Writing I	3
ENG	200	Core Writing II	3
COMS	108	Fund. Of Speech Communication	3
FYS	101	First Year Seminar	3
MATH	175	Calculus I	4
MATH	499C & D	Capstone and Senior Thesis I & II	3
Variable		General Education	18

Total General Education Hours	37

Program Core Hours

Program Core courses must be taken by all students in the program. This section cannot contain options such as "MSU 111 or MSU 112" or "choose 3 hours from the following list". Any core Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MATH	170	Introduction to Computer Science	4
MATH	175	Calculus I	4
MATH	195	Mathematical Communication I	1
MATH	275	Calculus II	4
MATH	276	Calculus III	4
MATH	295	Mathematical Communication II	1
MATH	300	Introduction to Mathematical Proofs	3
MATH	301	Elementary Linear Algebra	3
MATH	308	Discrete Mathematics	3
MATH	312	Numerical Methods	3
MATH	315	Functions and Modeling	3
MATH	350	Introduction to Higher Algebra	3
MATH	363	Differential Equations	3
MATH	365	Introduction to Mathematical Statistics	3
MATH	410	Introduction to Real Analysis	3
MATH	499 C & D	Capstone and Senior Thesis I & II	3

Total Program Core Hours (This total should be at least 50% or more of the Total Program Hours; not including general education hours and free elective hours).	48

Other Program Required Hours

Other Program Required Hours are required program courses with the option of choosing between two specific courses (i.e. "MSU 111 or MSU 112"). Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours

Total Other Program Required Hours	

Program Electives

Program Electives are a list of required program-related courses from which a student chooses a specific number of hours. (e.g. "choose 3 hours from the following list"). Track electives should be

listed in the Track section.			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**

Total Program Elective Hours	

IF YOUR PROGRAM DOES NOT HAVE TRACKS, PLEASE PROCEED TO THE FREE ELECTIVE SECTION BELOW.

***Please note: If you need more than two tracks, please contact *undergraduate@moreheadstate.edu* so that the forms can be revised to fit your needs.**

Program Track Name: General Track			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
PHYS	231 & 231A	Engineering Physics I and Lab	5
PHYS	232 & 232A	Engineering Physics II and Lab	5
MATH	481 or 355	Mathematics for Scientists and Engineers or Operations Research	3
MATH	404 or 486	Topology or Complex Variables	3

Total Track Hours	16

Program Track Name: MSUTeach Track			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
UTCH	100	Step 1	1
UTCH	150	Step 2	1
UTCH	200	Knowing and Learning in Mathematics and Science	3
UTCH	250	Perspectives on Science and Mathematics	3
UTCH	300	Classroom Interactions	3
UTCH	350	Project Based Instruction	3
UTCH	400	Research Methods	3
UTCH	450	Apprentice Teaching	12
MATH	370	Geometry I	3

MATH	371	Geometry II	3
PHYS	231 & 231A	Engineering Physics I and Lab	5
PHYS	232 & 232A	Engineering Physics II and Lab	5
MATH	Variable	Three hours of mathematics electives above MATH 300 except MATH 305, 330, 332, 402, or 403 as approved by department chair.	3

Total Track Hours	48

Program Track Name: MSUTeach with Computer Science Endorsement Track

Please list all Track Requirements

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
UTCH	100	Step 1	1
UTCH	150	Step 2	1
UTCH	200	Knowing and Learning in Mathematics and Science	3
UTCH	250	Perspectives on Science and Mathematics	3
UTCH	300	Classroom Interactions	3
UTCH	350	Project Based Instruction	3
UTCH	400	Research Methods	3
UTCH	450	Apprentice Teaching	12
MATH	370	Geometry I	3
MATH	371	Geometry II	3
CIS	205	Introduction to Programming - C++	3
CS	303	Data Structures	3
CS	310	Algorithms and Advanced Data Structures	3
CS	380	Software Engineering	3

Total Track Hours	47

Program Track Name: Data Analytics Track

Please list all Track Requirements

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
ETM	319	Quality and Reliability Engineering	3
MATH	355	Operations Research	3
MATH	419	Probability	3
MATH	420	Mathematical Statistics	3
MATH	453	Concepts in the Design of Experiments	3
MATH	455	Linear Statistical Methods	3
MATH	456	Nonparametric Statistics	3

MATH	385	Mathematics in Business, Industry, and Government	6
CIS	205	Introduction to Programming - C++	3
CS	303	Data Structures	3
CS	310	Algorithms and Advanced Data Structures	3
CS	420	Data Mining	3
CS	430	Machine Learning	3

Total Track Hours	42

Free Electives:

Free General Electives are any course hours still necessary to meet the 120 hour degree requirement after all program requirements are met.

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
Variable		Free Electives (General Track Only)	26

Total Free Elective Hours	26

TOTAL DEGREE HOURS (Total degree hours should equal 120 or contain a rationale as to why it cannot).	120 - 126

Rationale as to why program exceeds 120 hours (if applicable):

The MSUTeach Track has been approved with 126 hours. The MSUTeach with Computer Science Endoresement Track is at 125 hours. There is really no feasible way to reduce the hours We need all of the General Education courses, all of the Math Area Core courses, all of the UTCH Courses, and at least the CIS and three CS courses that are currently included. We want the graduates of this program to be able to teach Math and CS at the high school level. To create such an attractive option for students, a lot of coursework is required. The students who choose this program will be made very aware of the number of hours and can decide if it will be worth it. We feel that they will agree that it is.

If there is a change to the current catalog language for program competencies, admission criteria, standardized testing requirements, etc., please list the NEW catalog language below. Do not list the old catalog language. Do not list the program courses again.

Curriculum Map – Mathematics Area: General Track

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I
HUM II
SBS I
SBS II
NSC I
NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	MATH 170/170L	R	4		NSC I Course	G	3
	ENG 100	G	3		ENG 200	G	3
	MATH 175	G	4		MATH 275	G	4
	FYS 101	G	3		COMS 108	G	3
	HUM I Course	G	3		SBS I Course	G	3
	Total Credit Hours		17		**Total Credit Hours**		16

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	MATH 276	R	4		MATH 300	R/U	3
	MATH 195	R	1		MATH 301	R/U	3
	MATH 315	R/U	3		HUM II Course	G	3
	SBS II Course	G	3		MATH 295	R	1
	NSC II Course	G	3		PHYS 231/231A	R	5
	Total Credit Hours		14		**Total Credit Hours**		15

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	MATH 308	R/U	3		MATH 350	R/U	3
	MATH 363	R/U	3		MATH 410	R/U	3
	PHYS 232/232A	R	5		Electives	E	9
	MATH 365	R/U	3				
	Electives	E	3				
	Total Credit Hours		17		**Total Credit Hours**		15

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	MATH 404 or MATH 486	R/U	3		MATH 499D	G/U	1
	MATH 312	R/U	3		Electives	E/U	11
	MATH 355 or MATH 481	R/U	3				
	MATH 499C	G/U	2				
	Elective	E	3				
	Total Credit Hours		14		**Total Credit Hours**		12

(E) Elective
(G) General Education Course
(P) Pre-requisite
(R) Required Course
(U) Upper Division Course 300-400 level (you must have 42 hours)

Curriculum Map – Mathematics Area: MSUTeach Track

NOTE: This curriculum map assumes that you have not transferred in any previously completed college level courses. Further, it assumes that you have met all of the prerequisites for the courses listed below. The prerequisite for MATH 175: Calculus I is a Math ACT susbcore of 27 or Calculus KYOTE score of 15.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar	ENG 100 – Core Writing I	COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175	ENG 200 – Core Writing II	Capstone

One 3 credit hour course from each of the following categories (The approved course list may be accessed on the General Education site (log into MyMoreheadState and then open the "Academics" tab):

HUM I HUM II SBS I SBSII NSC I NSC II

FIRST YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	MATH 170/170L	R	4		HUM I course	G	3
	MATH 175	G/R	4		NSC I course	G	3
	UTCH 100	R	1		ENG 200	G	3
	ENG 100	G	3		MATH 275	R	4
	FYS 101	G	3		COMS 108	G	3
					UTCH 150	R	1
Total Credit Hours			15	Total Credit Hours			17

SECOND YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	MATH 276	R	4		MATH 300	R/U	3
	MATH 195	R	1		HUM II course	G	3
	MATH 315	R/U	3		SBS II course	G	3
	SBS I course	G	3		PHYS 231/231A	R	5
	NSC II course	G	3		UTCH 250	R	3
	UTCH 200	R	3		MATH 295	R	1
Total Credit Hours			17	Total Credit Hours			18

THIRD YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	MATH 308	R/U	3		MATH 301	R/U	3
	MATH 370	R/U	3		MATH 350	R/U	3
	PHYS 232/232A	R	5		MATH 371	R/U	3
	UTCH 300	R/U	3		MATH 410	R/U	3
	MATH 363	R/U	3		UTCH 350	R/U	3
					MATH 499C	G/U	2
Total Credit Hours			17	Total Credit Hours			17

FOURTH YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	MATH 365	R/U	3		UTCH 450	R/U	12
	MATH 312	R/U	3				
	MATH Elective	E/U	3				
	MATH 499D	G/U	1				
	UTCH 400	R/U	3				
Total Credit Hours			13	Total Credit Hours			12

(E) Elective, (G) General Education Course (S) Supplemental
(P) Pre-requisite (R) Required Course (U) Upper Division Course 300-400 level (you must have 42 hours)

Curriculum Map – Mathematics Area: MSUTeach with Comp. Sci. Endorsement

NOTE: This curriculum map assumes that you have not transferred in any previously completed college level courses. Further, it assumes that you have met all of the prerequisites for the courses listed below. The prerequisite for MATH 175: Calculus I is a Math ACT susbcore of 27 or Calculus KYOTE score of 15.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar	ENG 100 – Core Writing I	COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175	ENG 200 – Core Writing II	Capstone

One 3 credit hour course from each of the following categories (The approved course list may be accessed on the General Education site (log into MyMoreheadState and then open the "Academics" tab):

HUM I HUM II SBS I SBSII NSC I NSC II

FIRST YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	MATH 170/170L	R	4		CIS 205	R	3
	MATH 175	G/R	4		NSC I course	G	3
	UTCH 100	R	1		ENG 200	G	3
	ENG 100	G	3		MATH 275	R	4
	FYS 101	G	3		COMS 108	G	3
	HUM I Course	G	3		UTCH 150	R	1
	Total Credit Hours		18		Total Credit Hours		17

SECOND YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	MATH 276	R	4		CS 310	R/U	3
	MATH 195	R	1		HUM II course	G	3
	CS 303	R/U	3		SBS II course	G	3
	SBS I course	G	3		NSC II course	G	3
	UTCH 200	R	3		UTCH 250	R	3
					MATH 295	R	1
	Total Credit Hours		14		Total Credit Hours		16

THIRD YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	MATH 308	R/U	3		MATH 301	R/U	3
	MATH 370	R/U	3		MATH 350	R/U	3
	MATH 315	R/U	3		MATH 371	R/U	3
	UTCH 300	R/U	3		MATH 410	R/U	3
	MATH 300	R/U	3		UTCH 350	R/U	3
					MATH 499C	G/U	2
	Total Credit Hours		15		Total Credit Hours		17

FOURTH YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	MATH 365	R/U	3		UTCH 450	R/U	12
	MATH 312	R/U	3				
	MATH 363	E/U	3				
	MATH 499D	G/U	1				
	UTCH 400	R/U	3				
	CS 380	R/U	3				
	Total Credit Hours		16		Total Credit Hours		12

(E) Elective, (G) General Education Course (S) Supplemental
(P) Pre-requisite (R) Required Course (U) Upper Division Course 300-400 level (you must have 42 hours)

Curriculum Map – Mathematics Area: Data Analytics Track

NOTE: This curriculum map assumes that you have not transferred in any previously completed college level courses. Further, it assumes that you have met all of the prerequisites for the courses listed below. The prerequisite for MATH 175: Calculus I is a Math ACT susbcore of 27 or Calculus KYOTE score of 15.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar	ENG 100 – Core Writing I	COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175	ENG 200 – Core Writing II	Capstone

One 3 credit hour course from each of the following categories (The approved course list may be accessed on the General Education site (log into MyMoreheadState and then open the "Academics" tab):

HUM I HUM II SBS I SBSII NSC I NSC II

FIRST YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	MATH 170/170L	R	4		NSC I course	G	3
	ENG 100	G	3		ENG 200	G	3
	MATH 175	G	4		MATH 275	R	4
	FYS 101	G	3		COMS 108	G	3
	HUM I course	G	3		SBS I	U	3
Total Credit Hours			17	Total Credit Hours			16

SECOND YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	MATH 276	R	4		MATH 300	R/U	3
	MATH 195	R	1		MATH 301	R/U	3
	MATH 315	R/U	3		HUM II course	G	3
	SBS II course	G	3		MATH 295	R	1
	NSC II course	G	3		ETM 319	R/U	3
					MATH 350	R/U	3
Total Credit Hours			14	Total Credit Hours			16

THIRD YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	MATH 308	R/U	3		MATH 355	R/U	3
	MATH 363	R/U	3		MATH 410	R/U	3
	MATH 365	R/U	3		MATH 419	R/U	3
	MATH 385	R/U	3		CS 303	R/U	3
	CIS 205	R	3		MATH 385	R/U	3
Total Credit Hours			15	Total Credit Hours			15

FOURTH YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	CS 310	R/U	3		MATH 499D	G/U	1
	MATH 312	R/U	3		MATH 453	R/U	3
	CS 420	R/U	3		MATH 455	R/U	3
	MATH 499C	G/U	2		CS 430	R/U	3
	MATH 420	R/U	3		MATH 456	R/U	3
Total Credit Hours			14	Total Credit Hours			13

(E) Elective, (G) General Education Course (S) Supplemental
(P) Pre-requisite (R) Required Course (U) Upper Division Course 300-400 level (you must have 42 hours)

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form
Revised September 2016

Course:	PHED 205 Lifetime Fitness
Department:	Kinesiology, Health, and Imaging Sciences
College	Science

Signatures

Manuel Probst — 10-21-19
Originator (Print and Sign) — Date

Jennifer Dearden — (✓) Approved ( ) Disapproved — 10.16.19
Departmental Curriculum Committee Approval (Print and Sign) — Date

Manuel Probst — ( ) Approved ( ) Disapproved — 10-21-19
Department Chair's Approval (Print and Sign) — Date

DIRK GRUNE — (✓) Approved ( ) Disapproved — 2019-Nov-18
College Curriculum Committee Approval (Print and Sign) — Date

WAYNE MILLER — (✓) Approved ( ) Disapproved — 11/18/2019
Dean's Approval (Print and Sign) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council Approval (if appropriate) (Print and Sign) — Date

Laurie Caver — ( ) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee Action (Print and Sign) — Date

( ) Approved ( ) Disapproved
Vice President for Academic Affairs (Print and Sign) — Date

For Academic Programs Office Use Only

Date proposal received in Academic Programs Office: _____

Date Academic Programs notified SAC's Liaison: _____

Deleted Program Suspension Date: _____ Final Program Deletion Date: _____

SACS Response: ☐ Approved ☐ Denied ☐ Revision Required SAC's Response Date: _____

Date Academic Programs notified of SAC's Response: _____ CPE Notification Date: _____

COURSE
Minor Revision to an Existing Course

I. COURSE

This outline is to be used to report a minor modification (e.g., title, prefix, course number, catalog course description, minor admission or completion requirements, equate a current course with a new course) of previously approved courses. *Minor changes do not modify course content.* If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
Current Course Name:	PHED	205	Lifetime Fitness (A scientific approach)	2-2-3	Fall/Spring
Proposed Course Name:	PHED	205	Lifetime Fitness	2-2-3	Fall/Spring

List departments and programs that could be impacted by this proposal.

Exercise Science and Health Promotion only

List the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

NA

II. JUSTIFICATION:

Supply justification for the change and describe briefly what this proposal is requesting. (What are you doing and why are you doing it?)

We are simply changing the title of the course by removing the wording "A scientific approach".

III. ADDITIONAL INFORMATION

If this is a change that affects the current MSU Undergraduate Catalog content, please provide the verbiage as you would like for it to appear in the MSU Undergraduate catalog.

PHED 205 - Lifetime Fitness (2-2-3) Designed to provide the student with scientifically-based knowledge concerning practical application of physical fitness training and evaluation procedures while participating in a fitness program. Corequisite: PHED 205L

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised September 2016

Course:	PHED 326 Exercise Program Leadership
Department:	Kinesiology, Health and Imaging Sciences
College	Science

Signatures

Manuel Probst — 10-21-19
Originator (Print and Sign) — Date

Jennifer Dearden — (✓) Approved ( ) Disapproved — 10.16.19
Departmental Curriculum Committee Approval (Print and Sign) — Date

Manuel Probst — (✓) Approved ( ) Disapproved — 10-21-19
Department Chair's Approval (Print and Sign) — Date

DIRK GROPE — (✓) Approved ( ) Disapproved — 2019-Nov-19
College Curriculum Committee Approval (Print and Sign) — Date

WAYNE MILLER — (X) Approved ( ) Disapproved — 11/18/2019
Dean's Approval (Print and Sign) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council Approval (if appropriate) (Print and Sign) — Date

Laurie Couch — (✓) Approved ( ) Disapproved — 12/10/19
Undergraduate Curriculum Committee Action (Print and Sign) — Date

(✓) Approved ( ) Disapproved — 12-Dec-19
Vice President for Academic Affairs (Print and Sign) — Date

For Academic Programs Office Use Only

Date proposal received in Academic Programs Office: _____

Date Academic Programs notified SAC's Liaison: _____

Deleted Program Suspension Date: _____ Final Program Deletion Date: _____

SACS Response: ☐ Approved ☐ Denied ☐ Revision Required SAC's Response Date: _____

Date Academic Programs notified of SAC's Response: _____ CPE Notification Date: _____

COURSE

Minor Revision to an Existing Course

I. COURSE

This outline is to be used to report a minor modification (e.g., title, prefix, course number, catalog course description, minor admission or completion requirements, equate a current course with a new course) of previously approved courses. *Minor changes do not modify course content.* If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

Current Course Name:	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	PHED	326	Exercise Program Leadership	2-2-3	Fall/Spring
Proposed Course Name:	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	PHED	326	Exercise Program Leadership	2-2-3	Fall/Spring

List departments and programs that could be impacted by this proposal.

Exercise Science, Biology

List the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Gina Gonzalez, Charles Lydeard

II. JUSTIFICATION:

Supply justification for the change and describe briefly what this proposal is requesting. (What are you doing and why are you doing it?)

We are proposing that PHED 306 Functional Anatomy/Biomechanics or BIOL 234 Anatomy and Physiology I or BIOL 244 Anatomy and Physiology I be added as a pre-requisite for PHED 326. The addition of a pre-requisite will provide needed student preparation to PHED 326, making the student's learning experience more productive.

III. ADDITIONAL INFORMATION

If this is a change that affects the current MSU Undergraduate Catalog content, please provide the verbiage as you would like for it to appear in the MSU Undergraduate catalog.

PHED 326 - Exercise Program Leadership (2-2-3). Emphasis on leadership skills, motivational techniques, choreography, administrative functions dealing with equipment purchase, organization and use, and experiences in aerobic exercise and personal training formats. Corequisite: PHED 326L, Pre-requisite: PHED 306 or BIOL 234 or BIOL 244.

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form
Revised September 2016

Course:	PHED 432 Physiology of Exercise
Department:	Kinesiology, Health and Imaging Sciences
College	Science

Signatures

Manuel Probst Manuel Probst — 10-01-19
Originator (Print and Sign) — Date

Jennifer Dearden — (✓) Approved ( ) Disapproved — 10.16.19
Departmental Curriculum Committee Approval (Print and Sign) — Date

Manuel Probst — (X) Approved ( ) Disapproved — 10-21-19
Department Chair's Approval (Print and Sign) — Date

DIRK 6/10/15 — (✓) Approved ( ) Disapproved — 2019-Nov-18
College Curriculum Committee Approval (Print and Sign) — Date

WAYNE MILLER — (✓) Approved ( ) Disapproved — 11/18/2019
Dean's Approval (Print and Sign) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council Approval (if appropriate) (Print and Sign) — Date

Laurie Cowell — (✓) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee Action (Print and Sign) — Date

( ) Approved ( ) Disapproved
Vice President for Academic Affairs (Print and Sign) — Date

For Academic Programs Office Use Only

Date proposal received in Academic Programs Office: _____

Date Academic Programs notified SAC's Liaison: _____

Deleted Program Suspension Date: _____ Final Program Deletion Date: _____

SACS Response: ☐ Approved ☐ Denied ☐ Revision Required SAC's Response Date: _____

Date Academic Programs notified of SAC's Response: _____ CPE Notification Date: _____

COURSE
Minor Revision to an Existing Course

I. COURSE

This outline is to be used to report a minor modification (e.g., title, prefix, course number, catalog course description, minor admission or completion requirements, equate a current course with a new course) of previously approved courses. *Minor changes do not modify course content.* If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

Current Course Name:	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	PHED	432	Physiology of Exercise	3-0-3	Fall/Spring
Proposed Course Name:	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	PHED	432	Physiology of Exercise	3-0-3	Fall/Spring

List departments and programs that could be impacted by this proposal.

Exercise Science, Health Promotion

List the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Ms. Elizabeth Ash, David Castillo, Gina Gonzalez, Jennifer Dearden, Mr. Carl Pickering

II. JUSTIFICATION:

Supply justification for the change and describe briefly what this proposal is requesting. (What are you doing and why are you doing it?)

We are proposing that PHED 205 Lifetime Fitness be added as a prerequisite to PHED 432. The addition of a pre-requisite will make the student's learning experience more productive.

III. ADDITIONAL INFORMATION

If this is a change that affects the current MSU Undergraduate Catalog content, please provide the verbiage as you would like for it to appear in the MSU Undergraduate catalog.

PHED 432 Physiology of Exercise (3-0-3) Study of response of the body to muscular activity; work and efficiency, cardiorespiratory adjustment, training and fitness. Laboratory experiences are an integral part of this course. Prerequisite PHED 205 Lifetime Fitness

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 105 Physics 101: Introduction to Physics & Engineering Professions
Department: (as listed in current catalog)	Physics, Earth Science, & Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

Thomas Pannuti — 10/28/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

ERIC JEROE (X) Approved ( ) Disapproved — 10/28/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GRUPE (X) Approved ( ) Disapproved — 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER (X) Approved ( ) Disapproved — 11/20/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch — (✓) Approved ( ) Disapproved — 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved — 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	Physics 101: Introduction to Physics & Engineering Professions
Department: (as listed in current catalog)	Physics, Earth Science, & Space Systems Engineering
College: (as listed in current catalog)	Science

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The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	If an Information Technology signature is required, it has been obtained.	☒
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The course title, department, and college names correspond to the current catalog.	☒
☒	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The course description EXACTLY matches the course description stated in the syllabus.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☒
☒	Responses are complete and applicable for each question.	☒
☒	If the course requires the use of live animals, the IACUC form is attached.	☒
☒	The syllabus starts on a separate page.	☒
☒	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☒
☒	The syllabus contains the course title and course number (exactly as listed in the proposal).	☒
☒	The syllabus contains the academic term with date.	☒
☒	The syllabus contains the instructor's name.	☒
☒	The syllabus contains the office location.	☒

☑	The syllabus contains the instructor's office phone number and office hours schedule.
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.
☑	The syllabus contains a grading description and distribution (please be very specific).
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/
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☑	The entire proposal is saved as one Word document.

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Ignacio Birriel — 10/28/19

Originator (Sign and Print) — Approval Date

Thomas Pannuti — 10/28/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

Course Name (as listed in the current catalog)	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
Proposed Course Name	**Course prefix** (Example: ENG)	**Number** (Example: 100)	**Title** (Example: Writing I)	**Formula** (Example: 3-0-3)	**Faculty Load** (Contact your Department Chair or Dean's Office for assistance)	**Intended Terms Offered** (Example: Fall/Spring)
	PHYS	105	Introduction to Physics & Engineering Professions	0-2-1	1.47	Fall

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

Physics Major (Professional Physics Track) - Bachelor of Science
Physics Major (Applied Physics Track) - Bachelor of Science
Physics Area (Astrophysics Track) - Bachelor of Science
Physics Area (Computational Physics Track) - Bachelor of Science
Physics Area (Engineering Physics Electrical Track) - Bachelor of Science
Physics Area (Engineering Physics Mechanical Track) - Bachelor of Science
Physics Area (MSUTeach Track) - Bachelor of Science

This is a ☒ **required course. This is an** ☐ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

PHYS 105. Introduction to Physics & Engineering Professions. (0-2-1) Fall; An exploration of career opportunities in physics and engineering including professional vignettes and guest speakers. Students will learn what skills are necessary to succeed in the profession. Topics that will be explored as a series of laboratory explorations include fundamental units and concepts, computational tools, and communication skills (graphical, written, and verbal).

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The goals and objectives of this course are to offer students majoring in physics and pre-professional engineering exposure to career opportunities and essential skills . Students will learn fundamental physics concepts and apply mathematics to solve problems..

B. Justify the proposed instructional level (100-600) or instructional level change.

This course will be required of all incoming freshman students who desire to pursue a physics degree at MSU, a dual physics and engineering degree via the MSU-UKy 3-2 program, or the 2-2 transfer program. As such, it is appropriately numbered at the 100

level.

C. List the student learning outcomes for the course.

1. Learn the specific study skills to succeed in physics and engineering.
2. Use the basic concepts and laws in physics to solve basic problems.
3. Use spreadsheets as a computational tool to solve basic physics and engineering problems.
4. Communicate ideas in physics using graphs and power point presentations.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

Students will complete
1. weekly lab expoloration; graded worksheets
2. oral presentation on a engineering problem; scored by a rubric

E. Define how the course helps students to achieve learning objectives required for the program.

This course is intended for students who are pursuing a degree in physics or engineering. It introduces critical thinking and essential skills that they will continually revisit at more advanced levels as they move through a physics or engineering related degree.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The goals and outcomes proposed by PHYS 105 directly support the commitment to student success and high quality education outlined in the University's mission statement. This course is intended for students majoring in physics and engineering, and lays a foundation that they will build their education on.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None.

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

None.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Not Applicable. This is specifically for physics majors in the Department of Physics, Earth Science, & Space Systems Engineering

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

N/A

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

James Adkins	Ph.D.	AssistantProfessor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external adjunct faculty, if appropriate.
None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.
19, 15

B. Desired implementation date for the course.
Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
Online and Lecture

D. Additional facilities and special equipment needs for this course, if any.
None

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?
Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Department of Physics, Earth Science, & Space Systems Engineering

Physics 105: Introduction to Physics & Engineering Professions
Fall 2019

INSTRUCTOR: Dr. Jennifer Birriel. Office: Lappin 425D
Phone: 783-2924
Email: j.birriel@moreheadstate.edu

OFFICE HOURS: M-Th 11:00 am-11:50 am, F 10:00- 10:50 am or by appointment.

CATALOG DESCRIPTION: PHYS 105. Introduction to Physics & Engineering Professions. (0-2-1) Fall; An exploration of career opportunities in physics and engineering including professional vignettes and guest speakers. Students will learn what skills are necessary to succeed in the profession. Topics that will be explored as a series of laboratory explorations include fundamental units and concepts, computational tools, and communication skills (graphical, written, and verbal).

REQUIRED TEXTBOOK: Engineering Fundamentals: An Introduction to Engineering 5th Edition by Saeed Moaveni

ATTENDANCE: In accordance with the Morehead State University Handbook policy on attendance under the section entitled "Academic Programs & Regulations for Graduation*: "PROMPT and REGULAR attendance, being essential to the learning experience, is the RESPONSIBILITY of all students."* You are expected to observe this policy. In the event of an absence, it is your responsibility to learn the missed material and obtain the missed notes and assigned homework.

STUDENT LEARNER OUTCOMES:

1. Learn the specific study skills to succeed in physics and engineering.
2. Use the basic concepts and laws in physics to solve basic problems.
3. Use spreadsheets as a computational tool to solve basic physics and engineering problems.
4. Communicate ideas in physics using graphs and power point presentations.

LABORATORY SESSIONS: The laboratory sessions will consist of explorations completed either individually or in small groups. Any data collected within the lab will generally be analyzed outside of class by the individual student.

PRESENTATION PROJECT: Each student will give an individual power point presentation. These will be eight minutes long and will be presented during the final exam time slot for the course. The topic will be an examination of a modern problem in physics or engineering. You must have your topic approved by the instructor before the Wednesday of Thanksgiving Break.

EVALUATION:		
	Presentation	85%
	Weekly Laboratory Exploration	15%
	Total	100%

Grade Scale:

90 to 100 = A	80 to < 90 =B	60 to < 70 = C	60 to < 70 = D	<60 = E

TENTATIVE COURSE SCHEDULE & EXAM SCHEDULE:

Week of	Chapter(s)/ TOPIC/ Exploration
8/19	1/ What Physicists & Engineers Do/ Examination of Professional Profiles
8/26	2/ Physics & Engineering Study Skills/ How to Study & Time Management
9/2	4/ Basic Steps to Solving & Documenting Problems/ Basic Kinematics Problem
9/9	4/ Physics & Engineering Communication/ Graphs – Beyond the Line Graph
9/16	6/ Fundamental Units and Dimensions/ Significant Figures & Calculations
9/23	7+8/ Length & Time Variables/ A Volume Flow Rate Problem
9/30	9/ Mass & Mass Related Variables/ A Mass Flow Rate Problem
10/7	10/ Forces / Exploring Newton's Laws in One Dimension
10/14	10/ Force Related Variables/ A Pressure Problem
10/21	11/ Temperature Variables/ Heat Flow Exploration
10/28	12/ Electric Current Basics/ Simple Circuits – Batteries and Bulbs
11/4	13/ Energy & Power/ Energy Conservation Exploration
11/11	13/ Energy & Power/ Energy Efficiency & Energy Security
11/18	14/ Spreadsheet Computations/ Functions, Equations, Variables & Iterations
11/25	14/ Spreadsheet Computations/ Solving a useful Problem – Pursuit Problem
12/2	None/ Presentations with Power Point/ Critique Sample Presentations
12/9	**FINALS WEEK: Student Presentations**

Academic Honesty

Cheating, fabrication, plagiarism or helping others to commit these acts will not be tolerated. Academic dishonesty will result in severe disciplinary action including, but not limited to, failure of the student assessment item or course, and/ or dismissal from MSU. If you are not sure what constitutes academic dishonesty, read the Eagle: Student Handbook or ask your instructor. An example of plagiarism is copying information from the internet when appropriate credit is not given. The policy is located at http://morehead-st.edu/units/studentlife/handbook/academicdishonesty.html

Americans with Disabilities Act (ADA)

In compliance with the ADA, all students with a documented disability are entitled to reasonable accommodations and services to support their academic success and safety. Though a request for services may be made at any time, services are best applied when they are requested at or before the start of the semester. To receive accommodations and services the student should immediately contact the Disability Services Coordinator in the Office of Academic and Career Services, 223 Allie Young Hall, 606-783-5188, www.moreheadstate.edu/acs/

Campus Safety Statement

Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at http://www.moreheadstate.edu/emergency

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 201: Elementary Physics I
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

Thomas Iannuli — Thomas Iannuli — 10/31/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

(X) Approved ( ) Disapproved — 10/31/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GRUPE — (X) Approved ( ) Disapproved — 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

Wayne Miller — (X) Approved ( ) Disapproved — 11/20/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

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Laurie Corbett — ( ) Approved ( ) Disapproved — 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved — 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

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Initiator		Department Curriculum Committee Chair
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Ignacio Birriel 10/31/19

Originator (Sign and Print) Approval Date

Thomas Pannuti

Thomas Pannuti 10/31/19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

New Course or Major Revision to Existing Course

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  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ New Course ☒ Revised Course

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)	PHYS	201	Elementary Physics I	3-0-3	3.00	Fall/ Spring
Proposed Course Name	PHYS	201	Elementary Physics I	3-2-4	4.47	Fall/Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

Biological Sciences Area (Biology Track) – Bachelor of Science
Biological Sciences Area (MSUTeach Track) – Bachelor of Science
Biological Sciences Area (4+1 Track) – Bachelor of Science
Biomedical Sciences Area – Bachelor of Science
Biomedical Sciences Area (4+1 Track) – Bachelor of Science
Chemistry Area (Biomedical Track) – Bachelor of Science
Chemistry Area (Professional Chemist Track) – Bachelor of Science
Chemistry Area (MSUTeach Track) – Bachelor of Science
Chemistry Major – Bachelor of Science•
Veterinary Science Area - Bachelor of Science
Computer Science Area – Bachelor of Science
Engineering Technology Area – Bachelor of Science

This is a ☒ required course. This is an ☐ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

PHYS 201. Elementary Physics I. (3-2-4) Fall/Spring; An introduction to physics for applied science majors. Topics include concepts of mechanics, encompassing both kinematics and dynamics, Newton's laws of motion, work and energy, impulse and momentum, gravitation, rotation and torque. Additional topics include fluid dynamics, thermodynamics, waves and sound.
Prerequisite: "C" or better in MATH 152, ACT Math score of 22, or MATH 174 or MATH 175
Corequisite: PHYS 201L

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The objective of this course revision proposal is to integrate the current courses PHYS 201 and PHYS 201A into a single course, a lecture with an associated required laboratory component. This integration will eliminate issues with students taking introductory physics course lectures and labs in different semesters. The goals of this course are unchanged.

B. Justify the proposed instructional level (100-600) or instructional level change.

As an introductory course, PHYS 201 is concept rich and mathematically rigorous, a direct application of upper 100-level (150 or higher) mathematics courses that put it beyond the scope of a 100-level course.

C. List the student learning outcomes for the <u>course</u>.

1. Students will be able to apply the kinematic equations to analyze the motion of macroscopic objects.
2. Students will be able to perform a force analysis on a system using Newton's laws.
3. Students will be able to analyze a system using energy and momentum conservation.
4. Students will be able to apply conservation of angular momentum and use rotational kinematics to analyze rotating objects.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or** 2. Students will complete an exam; objective test.

1. Students will work problems for homework, scored for accuracy.
2. Students will complete in-class exams throughout the semester, scored by a rubric.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

This course is required for many science, education and health fields. It promotes critical thinking and fosters an understanding of the world around us, including how and why objects move. Both of these are particularly important skills for science related fields and future educators.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The goals and outcomes proposed by PHYS 201 directly support the commitment to student success and high quality education outlined in the University's mission statement. As a requirement for many different majors, this course develops critical thinking skills and imparts information that is tested as part of multiple certification examinations.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

None

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Agricultural Sciences Department

- Veterinary Science Area - Bachelor of Science

Biology and Chemistry Department

- Biological Sciences Area (Biology Track) – Bachelor of Science
- Biological Sciences Area (MSUTeach Track) – Bachelor of Science
- Biological Sciences Area (4+1 Track) – Bachelor of Science
- Biomedical Sciences Area – Bachelor of Science
- Biomedical Sciences Area (4+1 Track) – Bachelor of Science
- Chemistry Area (Biomedical Track) – Bachelor of Science
- Chemistry Area (Professional Chemist Track) – Bachelor of Science
- Chemistry Area (MSUTeach Track) – Bachelor of Science
- Chemistry Major – Bachelor of Science

School of Engineering and Computer Science

- Computer Science Area – Bachelor of Science
- Engineering Technology Area – Bachelor of Science

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Joyce Stubbs, Department Chair, Agricultural Sciences Department (email)
Dr. Charles Lydeard, Department Chair, Biology and Chemistry Department (email)
Dr. Ahmad Zargari, Associate Dean, School of Engineering and Computer Science

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external adjunct faculty, if appropriate.

None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

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B. Desired implementation date for the course.

Spring 2021

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

Lecture and Laboratory

D. Additional facilities and special equipment needs for this course, if any.

None

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Department of Physics, Earth Science and Space Systems Engineering

PHYS 201: Elementary Physics I
Spring 2021 Syllabus

Instructor:	Dr. Kevin Adkins
Lecture location:	LAH 206
Lecture time:	MTWTh 11:00 – 11:50 am
Email:	jkadkins@moreheadstate.edu
Office phone:	606-783-2918
Office location:	LAH 205A
Office Hours:	M – F: 10:00 – 11:00 am, or anytime my door is open Email me to arrange additional meeting times

Course Catalog Description: PHYS 201. Elementary Physics I. (3-2-4) Fall/Spring; An introduction to physics for applied science majors. Topics include concepts of mechanics, encompassing both kinematics and dynamics, Newton's laws of motion, work and energy, impulse and momentum, gravitation, rotation and torque. Additional topics include fluid dynamics, thermodynamics, waves and sound.
Prerequisite: "C" or better in MATH 152, ACT Math score of 22, or MATH 174 or MATH 175
Corequisite: PHYS 201L

Course Objectives:

1. You will be able to apply the kinematic equations to analyze the motion of macroscopic objects.
2. You will be able to perform a force analysis on a system using Newton's laws.
3. You will be able to analyze a system using energy and momentum conservation.
4. You will be able to apply conservation of angular momentum and use rotational kinematics to analyze rotating objects.

Required Course Materials: Textbook and WebAssign access
Text: Physics for Scientists and Engineers, 10th ed., Serway & Jewitt
WebAssign and the textbook are included in Cengage Unlimited, a subscription that gives you access to all your Cengage access codes and online textbooks. No matter how many Cengage products you use, they are included in Cengage Unlimited and the price stays the same. You can purchase access to Cengage Unlimited in the bookstore, or at www.cengage.com.

Attendance Policy: University Administrative Regulation (UAR) 131.05 states that "prompt and regular class attendance is the responsibility of all students. Students should be aware that excessive absenteeism, whether excused or unexcused, may affect their ability to earn a passing grade." You are expected to observe this policy. In the event of an absence, it is your responsibility to learn the missed material and obtain the missed notes and assigned homework.

Grading: Final grades will be calculated according to this weighting scheme

Laboratory Grade:	15%
WebAssign Homework:	17%
Exams (4):	68%
Total:	100%

Your final letter grade will be assigned according to:

A: 90% - 100%, B: 80% - 89.99%, C: 70% - 79.99%, D: 60% - 69.99%, E Below 60%

Laboratory Grade: The laboratory portion of this course is your opportunity to physically interact with the phenomena presented during lecture. Your grade in the lab will be based on your performance on the weekly activities that will completed and handed in during your scheduled lab period. Each lab activity is worth a total of ten (10) points, and your total cumulative score for the semester will be factored into your final course grade. You must receive passing grades in BOTH the lecture and lab to pass the course!

Missing more than two (2) lab sessions without an excuse will result in a failing grade for your laboratory grade. You may make up only one (1) unexcused absence during the lab make-up week offered the week before final exams.

WebAssign Homework: Homework problems give you the chance to hone your understanding by practicing the concepts that are presented in the lecture. There will be a variety of problems in the homework, and some exam problems will be based on these problems. Assignments are due by 11:59 pm on the specified due date announced in class and on WebAssign.

Exams: There will be a total of FOUR exams that will be based on the lecture material and homework. You may use a calculator on the exams, however you may NOT use any other electronic device in any way on the exams.

If you miss an exam, a make-up exam will be given with a valid excuse. The university policy on excused absences can be found in University Administrative Regulation 131.05. Make-up exams must be arranged as soon as possible after the exam, and must be taken within 48 hours of the original exam outside of class.

Academic Honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA): Americans with Disabilities Act (ADA) Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

Campus Safety Statement: Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: https://www.moreheadstate.edu/emergency.

Tentative Schedule & Important Dates

Week Of	**Chapter: Topic**	Exams
1	1: Measurement, Units, Estimation; 2: 1-D Motion	
2	2: 1-D Motion; 1: Trig & Vectors; 3: 2-D Kinematics	
3	3: 2-D Kinematics	
4	4: Forces & Newton's Laws of Motion	Exam I
5	4: Forces & Newton's Laws of Motion	
6	4: Forces & Newton's Laws of Motion	
7	5: Work & Energy	
8	5: Work & Energy	Exam II
9	6: Momentum & Collisions	
10	6: Momentum & Collisions	
11	7: Rotational Motion & Gravitation	
12	7: Rotational Motion & Gravitation	Exam III
13	8: Torque, Statics & Rotational Dynamics	
14	8: Torque, Statics & Rotational Dynamics	
15	9: Fluids	
16	9: Fluids; 13: Vibrations & Waves	
	Final Exam: TBA	Exam IV

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 201L: Elementary Physics I Lab
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

( ) Approved ( ) Disapproved

Department Chair or Associate Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

College Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

( ) Approved ( ) Disapproved

Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: **(as listed in current catalog)**	PHYS 201L: Elementary Physics I Lab
Department: **(as listed in current catalog)**	Physics, Earth Science and Space Systems Engineering
College: **(as listed in current catalog)**	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	If an Information Technology signature is required, it has been obtained.	☐
☐	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The course description EXACTLY matches the course description stated in the syllabus.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	If the course requires the use of live animals, the IACUC form is attached.	☐
☐	The syllabus starts on a separate page.	☐
☐	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☐
☐	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☐	The syllabus contains the academic term with date.	☐
☐	The syllabus contains the instructor's name.	☐
☐	The syllabus contains the office location.	☐

☐	The syllabus contains the instructor's office phone number and office hours schedule.	☐
☐	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☐
☐	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☐
☐	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☐
☐	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☐
☐	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☐
☐	The syllabus contains a grading description and distribution (please be very specific).	☐
☐	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☐
☐	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☐
☐	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☐
☐	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☐
☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) Approval Date

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)						
Proposed Course Name	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
	PHYS	201L	Elementary Physics I Lab	0-2-1	1.47	Fall/Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

Biological Sciences Area (Biology Track) – Bachelor of Science
Biological Sciences Area (MSUTeach Track) – Bachelor of Science
Biological Sciences Area (4+1 Track) – Bachelor of Science
Biomedical Sciences Area – Bachelor of Science
Biomedical Sciences Area (4+1 Track) – Bachelor of Science
Chemistry Area (Biomedical Track) – Bachelor of Science
Chemistry Area (Professional Chemist Track) – Bachelor of Science
Chemistry Area (MSUTeach Track) – Bachelor of Science
Chemistry Major – Bachelor of Science•
Veterinary Science Area - Bachelor of Science
Computer Science Area – Bachelor of Science
Engineering Technology Area – Bachelor of Science

This is a ☒ **required course. This is an** ☐ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

PHYS 201L. Elementary Physics I Lab. (0-2-1) Fall/Spring; Laboratory component for PHYS 201.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The objective of this proposal is to create the new course PHYS 201L which will accompany our updated integration of the lab component into the lecture component for PHYS 201.

B. Justify the proposed instructional level (100-600) or instructional level change.

This laboratory component accompanies the lecture course at the same level.

C. List the student learning outcomes for the course.

1. Students will be able to make measurements using standard lab equipment.
2. Students will be able to estimate and propagate uncertainties for their final results.

3. Students will be able to make connections between the lecture material and the real world.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

Students will complete weekly lab activities and submit their findings on a set of worksheets before they leave class at each meeting; scored by a rubric.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

This course promotes critical thinking and fosters an understanding of the world around us. Both of these are particularly important skills for all science related fields.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The goals and outcomes proposed by this course directly support the commitment to student success and high quality education outlined in the University's mission statement. This laboratory component further develops critical thinking skills gives the hands-on experience many students need to help solidify the concepts they are studying.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

None

C. List departments and programs that could be impacted by this proposal. For example, any department that:

a. requires the course
b. offers the course as an elective
c. offers a similar course
d. has an equated course
e. has the course listed as a co-requisite or pre-requisite
f. shares staff and/or resources

Agricultural Sciences Department
- Veterinary Science Area - Bachelor of Science

Biology and Chemistry Department
- Biological Sciences Area (Biology Track) – Bachelor of Science
- Biological Sciences Area (MSUTeach Track) – Bachelor of Science
- Biological Sciences Area (4+1 Track) – Bachelor of Science
- Biomedical Sciences Area – Bachelor of Science
- Biomedical Sciences Area (4+1 Track) – Bachelor of Science
- Chemistry Area (Biomedical Track) – Bachelor of Science
- Chemistry Area (Professional Chemist Track) – Bachelor of Science
- Chemistry Area (MSUTeach Track) – Bachelor of Science
- Chemistry Major – Bachelor of Science

School of Engineering and Computer Science
- Computer Science Area – Bachelor of Science
- Engineering Technology Area – Bachelor of Science

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Joyce Stubbs, Department Chair, Agricultural Sciences Department (email)
Dr. Charles Lydeard, Department Chair, Biology and Chemistry Department (email)
Dr. Ahmad Zargari, Associate Dean, School of Engineering and Computer Science

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external adjunct faculty, if appropriate.

None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

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B. Desired implementation date for the course.

Spring 2021

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

Laboratory

D. Additional facilities and special equipment needs for this course, if any.

None

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at

http://www.moreheadstate.edu/education/.

- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Dept. of Physics, Earth Science & Space Systems Engineering

PHYS 201L: Elementary Physics I Lab
Spring 2021

Instructor: Dr. Kevin Adkins Office: Lappin 205A
Phone: 3-2918
Email: jkadkins@moreheadstate.edu

Office Hours: M – F: 10:00 – 11:00 am, or anytime my door is open
Email me to arrange additional meeting times

Course Catalog Description:
PHYS 201L. Elementary Physics I Lab. (0-2-1) Fall/Spring; Laboratory component for PHYS 201.

Course Objectives:
1. You will be able to make measurements using standard lab equipment.
2. You will be able to estimate and propagate uncertainties for your final results.
3. You will be able to make connections between the lecture material and the real world.

Completing Laboratories: Plan to complete your lab work in the 1 hour and 50 minute time allotted. You will turn in your work at the completion of the lab, so be sure to work at a consistent pace. Make sure that you read the lab over before you arrive to ensure that you and your group can complete the lab in the allotted time.

Attendance Policy: Attendance to the lab is **mandatory.** Missing **more than** two unexcused lab meetings during the semester will result in an automatic failure for the laboratory component. You must pass **both** the laboratory component and the lecture component to pass the course.

Missed Laboratories: In the event that you miss a laboratory during the course of the term, you can make it up during the make-up week at the end of the term. **Only one make-up lab is allowed during the make-up week.**

Grading Procedures: All labs worksheets are worth 10 points and will be graded for accuracy. In order to receive full credit work must be clear and complete. You must fill out labs in PENCIL. **Labs done in pen will be docked by 2 points.**

Grade Scale:

A	**90 to 100%**
B	**80 to < 90%**
C	**70 to < 80%**
D	**60 to < 70%**
E	**< 60%**

Physics 201L: Weekly Lab Schedule

Week of	Scheduled Lab
1	0. Introduction to LabQuest II
2	1. Velocity & Acceleration
3	2. Measurement Uncertainty
4	3. Determining g with Free fall
5	4. Vector Addition
6	5. Newton's 2nd & 3rd Laws
7	6. Atwood Machine
8	7. Centripetal Acceleration
9	8. Horse Power
10	9. Energy & Its Conservation
11	10. Momentum
12	11. Torque
13	12. Bouyant Force
14	13. Hooke's Law
15	Thanksgiving Holiday – No Labs
16	Makeup Lab: Speed of Sound

Campus Safety Statement
Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

Academic honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA)
Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

Please insert (paste) any supporting documentation (email correspondence, IACUC form, etc.) here and remove this statement.

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 202: Elementary Physics II
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Thomas Painuti Date 10/31/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

☒ Approved ( ) Disapproved 10/31/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUPE ☒ Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

WAYNE MILLER ☒ Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Coker ☒ Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

☒ Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	PHYS 202: Elementary Physics II
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

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The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	If an Information Technology signature is required, it has been obtained.	☒
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The course title, department, and college names correspond to the current catalog.	☒
☒	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The course description EXACTLY matches the course description stated in the syllabus.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☒
☒	Responses are complete and applicable for each question.	☒
☒	If the course requires the use of live animals, the IACUC form is attached.	☒
☒	The syllabus starts on a separate page.	☒
☒	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☒
☒	The syllabus contains the course title and course number (exactly as listed in the proposal).	☒
☒	The syllabus contains the academic term with date.	☒
☒	The syllabus contains the instructor's name.	☒
☒	The syllabus contains the office location.	☒

☒	The syllabus contains the instructor's office phone number and office hours schedule.	☒
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☒
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☒
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☒
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☒
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☒
☒	The syllabus contains a grading description and distribution (please be very specific).	☒
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☒
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☒
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☒
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

[signature] Ignacio Birriel 10/31/19

Originator (Sign and Print) Approval Date

[signature] Thomas Pannuti 10/31/19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ New Course ☒ Revised Course

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)	PHYS	202	Elementary Physics II	3-0-3	3.00	Fall/Spring
Proposed Course Name	PHYS	202	Elementary Physics II	3-2-4	4.47	Fall/Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

Biological Sciences Area (Biology Track) – Bachelor of Science
Biological Sciences Area (MSUTeach Track) – Bachelor of Science
Biological Sciences Area (4+1 Track) – Bachelor of Science
Biomedical Sciences Area – Bachelor of Science
Biomedical Sciences Area (4+1 Track) – Bachelor of Science
Chemistry Area (Biomedical Track) – Bachelor of Science
Chemistry Area (Professional Chemist Track) – Bachelor of Science
Chemistry Area (MSUTeach Track) – Bachelor of Science
Chemistry Major – Bachelor of Science•
Veterinary Science Area - Bachelor of Science
Computer Science Area – Bachelor of Science
Engineering Technology Area – Bachelor of Science

This is a ☒ required course. This is an ☐ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

PHYS 202. Elementary Physics II. (3-2-4) Fall/Spring; An introduction to physics for applied science majors. A continuation of PHYS 201. Topics include concepts of electric charge and force on charged particles, electric and magnetic fields and flux, electric potential, Gauss's law, resistance, capacitance, Ohm's law, Kirchhoff's rules, electromagnetic waves, the nature of light, and geometric optics. Additional topics include nuclear and atomic physics. Prerequisite: "C" or better in PHYS 201. Corequisite: PHYS 202L

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The objective of this course revision proposal is to integrate the current courses PHYS 202 and PHYS 202A into a single course, a lecture with an associated required laboratory component. This integration will eliminate issues with students taking introductory physics course lectures and labs in different semesters. The goals of this course are unchanged.

B. Justify the proposed instructional level (100-600) or instructional level change.

As an introductory course, PHYS 202 is concept rich and mathematically rigorous, a direct application of upper 100-level (150 or higher) mathematics courses that put it beyond the scope of a 100-level course.

C. List the student learning outcomes for the course.

1. Students will be able to understand and make calculations related to electric fields.
2. Students will be able identify DC circuit elements and analyze simple circuits using Kirchhoff's rules.
3. Students will be able to identify sources of and calculate magnetic fields.
4. Students will be able to make calculations related to reflection and refraction of light.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or** 2. Students will complete an exam; objective test.

1. Students will work problems for homework, scored for accuracy.
2. Students will complete in-class exams throughout the semester, scored by a rubric.

E. Define how the course helps students to achieve learning objectives required for the program.

This course is required for many science, education and health fields. It promotes critical thinking and fosters an understanding of the world around us, including how and why objects move. Both of these are particularly important skills for science related fields and future educators.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The goals and outcomes proposed by PHYS 202 directly support the commitment to student success and high quality education outlined in the University's mission statement. As a requirement for many majors, this course develops critical thinking skills and imparts information that is tested as part of multiple certification examinations.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

None

C. List departments and programs that could be impacted by this proposal. For example, any department that:

a. requires the course
b. offers the course as an elective
c. offers a similar course
d. has an equated course
e. has the course listed as a co-requisite or pre-requisite
f. shares staff and/or resources

Agricultural Sciences Department
- Veterinary Science Area - Bachelor of Science

Biology and Chemistry Department
- Biological Sciences Area (Biology Track) – Bachelor of Science
- Biological Sciences Area (MSUTeach Track) – Bachelor of Science
- Biological Sciences Area (4+1 Track) – Bachelor of Science
- Biomedical Sciences Area – Bachelor of Science
- Biomedical Sciences Area (4+1 Track) – Bachelor of Science
- Chemistry Area (Biomedical Track) – Bachelor of Science
- Chemistry Area (Professional Chemist Track) – Bachelor of Science
- Chemistry Area (MSUTeach Track) – Bachelor of Science
- Chemistry Major – Bachelor of Science

School of Engineering and Computer Science
- Computer Science Area – Bachelor of Science
- Engineering Technology Area – Bachelor of Science

D. List each of the individuals notified by the proposing department chair and define the method of

contact (e-mail, phone conversation, etc.)
Dr. Joyce Stubbs, Department Chair, Agricultural Sciences Department (email)
Dr. Charles Lydeard, Department Chair, Biology and Chemistry Department (email)
Dr. Ahmad Zargari, Associate Dean, School of Engineering and Computer Science

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external adjunct faculty, if appropriate.
None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.
49, 49

B. Desired implementation date for the course.
Spring 2021

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
Lecture and Laboratory

D. Additional facilities and special equipment needs for this course, if any.
None

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?
Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Department of Physics, Earth Science and Space Systems Engineering

PHYS 202: Elementary Physics II
Spring 2021 Syllabus

Instructor:	Dr. Kevin Adkins
Lecture location:	LAH 206
Lecture time:	MTWTh 11:00 – 11:50 am
Email:	jkadkins@moreheadstate.edu
Office phone:	606-783-2918
Office location:	LAH 205A
Office Hours:	M – F: 10:00 – 11:00 am, or anytime my door is open Email me to arrange additional meeting times

Course Catalog Description: PHYS 202. Elementary Physics II. (3-2-4) Fall/Spring; An introduction to physics for applied science majors. A continuation of PHYS 201. Topics include concepts of electric charge and force on charged particles, electric and magnetic fields and flux, electric potential, Gauss's law, resistance, capacitance, Ohm's law, Kirchhoff's rules, electromagnetic waves, the nature of light, and geometric optics. Additional topics include nuclear and atomic physics. Prerequisite: "C" or better in PHYS 201. Corequisite: PHYS 202L

Course Objectives:

1. You will be able to understand and make calculations related to electric fields.
2. You will be able identify DC circuit elements and analyze simple circuits using Kirchhoff's rules.
3. You will be able to identify sources of and calculate magnetic fields.
4. You will be able to make calculations related to reflection and refraction of light.

Required Course Materials: Textbook and WebAssign access
Text: Physics for Scientists and Engineers, 10th ed., Serway & Jewitt

WebAssign and the textbook are included in Cengage Unlimited, a subscription that gives you access to all your Cengage access codes and online textbooks. No matter how many Cengage products you use, they are included in Cengage Unlimited and the price stays the same. You can purchase access to Cengage Unlimited in the bookstore, or at www.cengage.com.

Attendance Policy: University Administrative Regulation (UAR) 131.05 states that "prompt and regular class attendance is the responsibility of all students. Students should be aware that excessive absenteeism, whether excused or unexcused, may affect their ability to earn a passing grade." While there is no formal attendance policy for this course, missing lectures frequently will be detrimental to your grade, as the exams will cover in-class material. It is your responsibility to catch up on any material and obtain notes that you miss as a result of an absence.

Grading: Final grades will be calculated according to this weighting scheme

Laboratory Grade:	15%
WebAssign Homework:	17%
Exams (4):	68%
Total:	100%

Your final letter grade will be assigned according to:

A: 90% - 100%, B: 80% - 89.99%, C: 70% - 79.99%, D: 60% - 69.99%, E Below 60%

Laboratory Grade: The laboratory portion of this course is your opportunity to physically interact with the phenomena presented during lecture. Your grade in the lab will be based on your performance on the weekly activities that will completed and handed in during your scheduled lab period. Each lab activity is worth a total of ten (10) points, and your total cumulative score for the semester will be factored into your final course grade. You must receive passing grades in BOTH the lecture and lab to pass the course!

Missing more than two (2) lab sessions without an excuse will result in a failing grade for your laboratory grade. You may make up only one (1) unexcused absence during the lab make-up week offered the week before final exams.

WebAssign Homework: Homework problems give you the chance to hone your understanding by practicing the concepts that are presented in the lecture. There will be a variety of problems in the homework, and some exam problems will be based on these problems. Assignments are due by 11:59 pm on the specified due date announced in class and on WebAssign.

Exams: There will be a total of FOUR exams that will be based on the lecture material and homework. You may use a calculator on the exams, however you may NOT use any other electronic device in any way on the exams.

If you miss an exam, a make-up exam will be given with a valid excuse. The university policy on excused absences can be found in University Administrative Regulation 131.05. Make-up exams must be arranged as soon as possible after the exam, and must be taken within 48 hours of the original exam outside of class.

Academic Honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA): Americans with Disabilities Act (ADA) Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

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Tentative Schedule & Important Dates

Week Of	Chapter: Content	Exams
1	18: Electric Charge and Electric Fields.	
2	Finish 18, begin 19: Electrical Field and Electric Potential	
3	19: Electrical Field and Electric Potential	
4	20: Electric Current, Resistance, and Ohm's Law	Exam I
5	21: Circuits and DC Instruments	
6	21: Circuits and DC Instruments	
7	22: Magnetism	
8	22: Magnetism	Exam II
9	23: Electromagnetic Induction & AC Current	
10	24: Electromagnetic Waves	
11	25: Geometric Optics	
12	25: Geometric Optics	Exam III
13	26: Vision and Optical Instruments	
14	27: Wave Optics	
15	Selected Topics in Modern Physics. Ch. 28, 30, 31	
16	Selected Topics in Modern Physics. Ch. 28, 30, 31	
	Final Exam: TBA	Exam V

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ New Course ☐ Revised Course

Course: (if revision, as listed in current catalog)	PHYS 202L: Elementary Physics II Lab
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

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Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

( ) Approved ( ) Disapproved

Department Chair or Associate Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

College Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

( ) Approved ( ) Disapproved

Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: **(as listed in current catalog)**	PHYS 202L: Elementary Physics II Lab
Department: **(as listed in current catalog)**	Physics, Earth Science and Space Systems Engineering
College: **(as listed in current catalog)**	Science

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	If an Information Technology signature is required, it has been obtained.	☐
☐	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The course description EXACTLY matches the course description stated in the syllabus.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	If the course requires the use of live animals, the IACUC form is attached.	☐
☐	The syllabus starts on a separate page.	☐
☐	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☐
☐	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☐	The syllabus contains the academic term with date.	☐
☐	The syllabus contains the instructor's name.	☐
☐	The syllabus contains the office location.	☐

☐	The syllabus contains the instructor's office phone number and office hours schedule.	☐
☐	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☐
☐	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☐
☐	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☐
☐	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☐
☐	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☐
☐	The syllabus contains a grading description and distribution (please be very specific).	☐
☐	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☐
☐	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☐
☐	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☐
☐	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☐
☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) Approval Date

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)						
Proposed Course Name	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
	PHYS	202L	Elementary Physics II Lab	0-2-1	1.47	Fall/Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

Biological Sciences Area (Biology Track) – Bachelor of Science
Biological Sciences Area (MSUTeach Track) – Bachelor of Science
Biological Sciences Area (4+1 Track) – Bachelor of Science
Biomedical Sciences Area – Bachelor of Science
Biomedical Sciences Area (4+1 Track) – Bachelor of Science
Chemistry Area (Biomedical Track) – Bachelor of Science
Chemistry Area (Professional Chemist Track) – Bachelor of Science
Chemistry Area (MSUTeach Track) – Bachelor of Science
Chemistry Major – Bachelor of Science•
Veterinary Science Area - Bachelor of Science
Computer Science Area – Bachelor of Science
Engineering Technology Area – Bachelor of Science

This is a ☒ **required course. This is an** ☐ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

PHYS 202L. Elementary Physics II Lab. (0-2-1) Fall/Spring; Laboratory component for PHYS 202.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The objective of this proposal is to create the new course PHYS 202L which will accompany our updated integration of the lab component into the lecture component for PHYS 202.

B. Justify the proposed instructional level (100-600) or instructional level change.

This laboratory component accompanies the lecture course at the same level.

C. List the student learning outcomes for the course.

1. Students will be able to make measurements using standard lab equipment.
2. Students will be able to estimate and propagate uncertainties for their final results.

3. Students will be able to make connections between the lecture material and the real world.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

Students will complete weekly lab activities and submit their findings on a set of worksheets before they leave class at each meeting; scored by a rubric.

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

This course promotes critical thinking and fosters an understanding of the world around us. Both of these are particularly important skills for all science related fields.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The goals and outcomes proposed by this course directly support the commitment to student success and high quality education outlined in the University's mission statement. This laboratory component further develops critical thinking skills gives the hands-on experience many students need to help solidify the concepts they are studying.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

None

C. List departments and programs that could be impacted by this proposal. For example, any department that:

a. requires the course
b. offers the course as an elective
c. offers a similar course
d. has an equated course
e. has the course listed as a co-requisite or pre-requisite
f. shares staff and/or resources

Agricultural Sciences Department
- Veterinary Science Area - Bachelor of Science

Biology and Chemistry Department
- Biological Sciences Area (Biology Track) – Bachelor of Science
- Biological Sciences Area (MSUTeach Track) – Bachelor of Science
- Biological Sciences Area (4+1 Track) – Bachelor of Science
- Biomedical Sciences Area – Bachelor of Science
- Biomedical Sciences Area (4+1 Track) – Bachelor of Science
- Chemistry Area (Biomedical Track) – Bachelor of Science
- Chemistry Area (Professional Chemist Track) – Bachelor of Science
- Chemistry Area (MSUTeach Track) – Bachelor of Science
- Chemistry Major – Bachelor of Science

School of Engineering and Computer Science
- Computer Science Area – Bachelor of Science
- Engineering Technology Area – Bachelor of Science

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Joyce Stubbs, Department Chair, Agricultural Sciences Department (email)
Dr. Charles Lydeard, Department Chair, Biology and Chemistry Department (email)
Dr. Ahmad Zargari, Associate Dean, School of Engineering and Computer Science

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external adjunct faculty, if appropriate.

None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

24, 48

B. Desired implementation date for the course.

Spring 2021

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

Laboratory

D. Additional facilities and special equipment needs for this course, if any.

None

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at

http://www.moreheadstate.edu/education/.

- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Dept. of Physics, Earth Science & Space Systems Engineering

PHYS 202L: Elementary Physics II Lab
Fall 2019

Instructor: Dr. Kevin Adkins Office: Lappin 205A
Phone: 3-2918
Email: jkadkins@moreheadstate.edu

Office Hours: M – F: 10:00 – 11:00 am, or anytime my door is open
Email me to arrange additional meeting times

Course Catalog Description:
PHYS 202L. Elementary Physics II Lab. (0-2-1) Fall/Spring; Laboratory component for PHYS 202.

Course Objectives:
1. You will be able to make measurements using standard lab equipment.
2. You will be able to estimate and propagate uncertainties for your final results.
3. You will be able to make connections between the lecture material and the real world.

Completing Laboratories: Plan to complete your lab work in the 1 hour and 50 minute time allotted. You will turn in your work at the completion of the lab, so be sure to work at a consistent pace. Make sure that you read the lab over before you arrive to ensure that you and your group can complete the lab in the allotted time.

Attendance Policy: Attendance to the lab is **mandatory.** Missing **more than** two unexcused lab meetings during the semester will result in an automatic failure for the laboratory component. You must pass **both** the laboratory component and the lecture component to pass the course.

Missed Laboratories: In the event that you miss a laboratory during the course of the term, you can make it up during the make-up week at the end of the term. **Only one make-up lab is allowed during the make-up week.**

Grading Procedures: All labs worksheets are worth 10 points and will be graded for accuracy. In order to receive full credit work must be clear and complete. You must fill out labs in PENCIL. **Labs done in pen will be docked by 2 points.**

Grade Scale:

A	**90 to 100%**
B	**80 to < 90%**
C	**70 to < 80%**
D	**60 to < 70%**
E	**< 60%**

Physics 202L: Weekly Lab Schedule

Week of	Scheduled Lab
1	NO LAB
2	1. Coulomb's Law
3	2. Equipotential Lines
4	3. Intro to the Digital Multi-meter
5	4. Resistance Measurements
6	5. DC Circuits
7	6. Capacitance & RC Circuits
8	7. Magnetic Fields
9	8. Current Balance
10	9. Earth's Magnetic Field
11	10. Lenz's and Faraday Laws
12	11. Reflection & Refraction
13	12. Thin Lenses & Mirrors
14	13. Diffraction
15	Thanksgiving Holiday – No Labs
16	Makeup Lab: Polarization

Campus Safety Statement
Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

Academic honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA)
Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

Please insert (paste) any supporting documentation (email correspondence, IACUC form, etc.) here and remove this statement.

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 203: Fundamentals of Physics
Department: (as listed in current catalog)	Physics, Earth Science, & Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

Thomas Pannuti — 10/31/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

(X) Approved ( ) Disapproved — 10/31/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GRUPE — (X) Approved ( ) Disapproved — 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER — (X) Approved ( ) Disapproved — 11/20/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corich — ( ) Approved ( ) Disapproved — 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved — 12/16/19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	PHYS 203: Fundamentals of Physics
Department: (as listed in current catalog)	Physics, Earth Science, & Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	If an Information Technology signature is required, it has been obtained.	☒
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The course title, department, and college names correspond to the current catalog.	☒
☒	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The course description EXACTLY matches the course description stated in the syllabus.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☒
☒	Responses are complete and applicable for each question.	☒
☒	If the course requires the use of live animals, the IACUC form is attached.	☒
☒	The syllabus starts on a separate page.	☒
☒	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☒
☒	The syllabus contains the course title and course number (exactly as listed in the proposal).	☒
☒	The syllabus contains the academic term with date.	☒
☒	The syllabus contains the instructor's name.	☒
☒	The syllabus contains the office location.	☒

☒	The syllabus contains the instructor's office phone number and office hours schedule.	☒
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☒
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☒
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☒
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☒
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☒
☒	The syllabus contains a grading description and distribution (please be very specific).	☒
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☒
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☒
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☒
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Ignacio Birriel — 10/31/19

Originator (Sign and Print) — Approval Date

Thomas Pannuti — 10/31/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)						
Proposed Course Name	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
	PHYS	203	Funadamentals of Physics	4-0-4	4	Fall/Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Engineering Technology Area – Bachelor of Science
Technology Management Area – Bachelor of Science
Middle Grades (5-9) Education Area – Bachelor of Arts

This is a ☒ **required course. This is an** ☐ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

PHYS 203. Funadamentals of Physics. (4-0-4) Fall/Spring; This course surveys general principles of physics. Includes topics such as motion, force, energy, fluids, electricity and magnetism, and optics. This course is intended for students in the technology and teaching fields. Students will gain an understanding of the physical and mathematical principles involved in everyday life and technology. Pre-requisite: One of the following: MATH 141, 152, 174, or ACT Math sub-score of 22 or better.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The goals and objectives of this course are to offer students in the technolgy and teaching fields a broad overview of the principles of physics that apply to everyday life and technology. Students will learn fundamental physics concepts and apply mathematics to solve problems.

This course will be more closely aligned with the Physics content categories of the Middle Grades Science Praxis II Exam (see https://www.ets.org/praxis/prepare/materials/5440) and contribute to greater success on test takers' pass rate. This course would replace the Physics requirement of PHYS 201 and Lab in the current Middle Grades Program science component Curriculum Map.

Our current course offerings include only a two semester course (Physics 201 and 202) which cover more concepts in greater depth. Due to credit hour constraints, technology and middle school science teachers can only take Physics 201 and its associated lab Physics 201A, which focus only on mechanics. This new offering will have a broader coverage of topics at a depth and mathematical level more appropriate to these fields of study.

B. Justify the proposed instructional level (100-600) or instructional level change.

The mathematics of the course require that students have completed MATH 141, 152, 174, or have an ACT Math sub-score of 22 or better. Therefore, this course will generally be taken as a sophmore, making the 200 level appropriate.

C. List the student learning outcomes for the course.

1. Use the basic concepts and laws in physics to solve conceptual and quantitative problems.
2. Convert a physical situation articulated in English to a mathematical formulation.
3. Apply basic mathematical tools, including algebra and vectors, to solve physics problems.
4. Recognize whether or not the result of a calculation makes physical sense;
5. Apply the physical knowledge to other disciplines, including their everyday lives.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

Students will complete
1.weekly online homework assignments; scored by a rubric.
2. four unit exams; objective and subjective test.
3. a comprehensive final examination; objective and subjective test.

E. Define how the course helps students to achieve learning objectives required for the program.

This course promotes critical thinking and fosters an understanding of the world around us, including how and why objects move. Both of these are particularly important skills for science related fields and future educators.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The goals and outcomes proposed by PHYS 203 directly support the commitment to student success and high quality education outlined in the University's mission statement. In the Middle Grades Program, one of the goals is to have 80% pass rates of candidates' Praxis II content area exams by the end of Cycle #3 (Clinical Practice), this course should help the Middle Grades Program area achieve this goal in the area of Science.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None.

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

There is some overlap with this course and Physics 201 and 202. However, these courses cover more material at greater depth and using a higher level of mathematics. These courses also are largely populated toward the biological fields and many of the applications and examples are, therefore, more medical and biological in nature.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Engineering and Technology Management Department
- Engineering Technology Area – Bachelor of Science
- Technology Management Area – Bachelor of Science

Middle Grades and Secondary Education Department
- Middle Grades (5-9) Education Area – Bachelor of Arts

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Ahmad Zargari, Associate Dean, School of Engineering and Computer Science
Dr. April Miller, Chair, Middle Grades and Secondary Education Department

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external adjunct faculty, if appropriate.
None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.
29, 29

B. Desired implementation date for the course.
Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
Online and Lecture

D. Additional facilities and special equipment needs for this course, if any.
None

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?
Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes;

any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.

- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Department of Physics, Earth Science and Space Systems Engineering

PHYS 203: Fundamentals of Physics
Fall 2020

INSTRUCTOR: Dr. Jennifer Birriel. Office: Lappin 425D
Phone: 783-2924
Email: j.birriel@moreheadstate.edu

OFFICE HOURS: M-Th 11:00 am-11:50 am, F 10:00- 10:50 am or by appointment.

CATALOG DESCRIPTION:

PHYS 203. Funadamentals of Physics. (4-0-4) Fall/Spring; This course surveys general principles of physics. Includes topics such as motion, force, energy, fluids, electricity and magnetism, and optics. This course is intended for students in the technology and teaching fields. Students will gain an understanding of the physical and mathematical principles involved in everyday life and technology. Pre-requisite: One of the following: MATH 141, 152, 174, or ACT Math sub-score of 22 or better.

REQUIRED TEXTBOOK: Applied Physics, 11th Edition by Dale Ewen, Neill Schurter, Erik Gundersen

REQUIRED ONLINE HOMEWORK: Sapling Learning

ATTENDANCE: In accordance with the Morehead State University Handbook policy on attendance under the section entitled "Academic Programs & Regulations for Graduation*: "PROMPT and REGULAR attendance, being essential to the learning experience, is the RESPONSIBILITY of all students."* You are expected to observe this policy. In the event of an absence, it is your responsibility to learn the missed material and obtain the missed notes and assigned homework.

STUDENT LEARNER OUTCOMES:

1. Use the basic concepts and laws in physics to solve conceptual and quantitative problems.
2. Convert a physical situation articulated in English to a mathematical formulation.
3. Apply basic mathematical tools, including algebra and vectors, to solve physics problems.
4. Recognize whether or not the result of a calculation makes physical sense;
5. Apply the physical knowledge to other disciplines, including their everyday lives.

CLASS SESSIONS: The class sessions each week will support and extend the assigned readings. They will involve demonstrations, the working of example problems, exploration of material not in the text, and parallel presentation of difficult concepts. Your responsibilities will be to attend class, read the assignment before each class, and actively participate in classroom discussions and problem solving sessions.

HOMEWORK: Weekly homework is assigned on the Sapling Learning Website. You are expected to complete your weekly homework assignments on time. Late homework will not be accepted. You are expected to do your own homework – this will enable you to do well on the exams.

TENTATIVE COURSE SCHEDULE & EXAM SCHEDULE:

Week of	**Chapters: Topic**
8/19	1. The Physics Tool Kit & 2. Problem Solving
8/26	3. Vectors
9/2	4. Motion
9/9	5. Forces Exam I over Ch. 1-4
9/16	6. Momentum
9/23	8. Work & Energy
9/30	9. Rotational Motion Exam II over Ch. 5,6,8,9
10/7	10. Simple Machines
10/14	13. Fluids
10/21	16. Wave Motion & Sound
10/28	17. Basic Electricity Exam III Ch. 10, 13, 16
11/4	18. Magnetism
11/11	19. Alternating Current
11/18	20. Light Exam IV Ch. 17-19
11/25	20. Light >>>>>>>>Thanksgiving 27-29
12/2	21. Reflection & Refraction
12/9	**FINALS WEEK: Comprehensive Final Exam**

EXAMS:

- There will be FOUR exams scheduled during the term consisting of
  - Multiple choice problems
    and/or
  - long answer style problems
- During exams you must bring:
  - a No. 2 pencil
  - a scientific calculator
  - a 3”X5” notebook card with formulas
  - NO ELECTRONIC devices other than your calculator are allowed during the exam.
- There will be a comprehensive final examination administered during finals week.

- MISSED EXAMS:
  - Only ONE make-up exam is allowed, you must have a valid excuse.
  - Whatever the reason for missing the exam, you must arrange the make-up exam ASAP and the missed exam must be made-up within 48 hours of the original exam date or you will incur a zero on the exam.

EVALUATION:

Exams	4@15% = 60%
Comprehensive Final Exam	25%
Weekly Homework	15%
Total	100%

Grade Scale:

90 to 100 = A 80 to < 90 =B 60 to < 70 = C 60 to < 70 = D <60 = E

Academic Honesty
Cheating, fabrication, plagiarism or helping others to commit these acts will not be tolerated. Academic dishonesty will result in severe disciplinary action including, but not limited to, failure of the student assessment item or course, and/ or dismissal from MSU. If you are not sure what constitutes academic dishonesty, read the Eagle: Student Handbook or ask your instructor. An example of plagiarism is copying information from the internet when appropriate credit is not given. The policy is located at http://morehead-st.edu/units/studentlife/handbook/academicdishonesty.html

Americans with Disabilities Act (ADA)
In compliance with the ADA, all students with a documented disability are entitled to reasonable accommodations and services to support their academic success and safety. Though a request for services may be made at any time, services are best applied when they are requested at or before the start of the semester. To receive accommodations and services the student should immediately contact the Disability Services Coordinator in the Office of Academic and Career Services, 223 Allie Young Hall, 606-783-5188, www.moreheadstate.edu/acs/

Campus Safety Statement
Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at http://www.moreheadstate.edu/emergency

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 231: Engineering Physics I
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

Thomas Pannuti Thomas Pannuti 10/28/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Eric Jerde ERIC JERDE (X) Approved ( ) Disapproved 10/28/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUPE (X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

Wayne Miller WAYNE MILLER (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corich (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12/16/19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	PHYS 231: Engineering Physics I
Department: (as listed in current catalog)	Phyics, Earth Sciece and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	If an Information Technology signature is required, it has been obtained.	☐
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The course title, department, and college names correspond to the current catalog.	☒
☒	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The course description EXACTLY matches the course description stated in the syllabus.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☒
☒	Responses are complete and applicable for each question.	☒
☒	If the course requires the use of live animals, the IACUC form is attached.	☒
☒	The syllabus starts on a separate page.	☒
☒	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☒
☒	The syllabus contains the course title and course number (exactly as listed in the proposal).	☒
☒	The syllabus contains the academic term with date.	☒
☒	The syllabus contains the instructor's name.	☒
☒	The syllabus contains the office location.	☒

☒	The syllabus contains the instructor's office phone number and office hours schedule.
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.
☒	The syllabus contains a grading description and distribution (please be very specific).
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.
☐	The entire proposal is saved as one Word document.

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

[signature]	Ignacio Birriel	10/28/19
Originator (Sign and Print)		Approval Date
[signature]	Thomas Pannuti	10/28/19
Department Curriculum Committee Chair (Sign and Print)		Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ New Course ☒ Revised Course

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)	PHYS	231	Engineering Physics I	4-0-4	4.00	Fall
Proposed Course Name	PHYS	231	Engineering Physics I	4-2-5	5.47	Fall

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

Mathematics Area (General Track) – Bachelor of Science
Mathematics Area (MSUTeach Track) – Bachelor of Science
Physics Major (Professional Physics Track) - Bachelor of Science
Physics Major (Applied Physics Track) - Bachelor of Science
Physics Area (Astrophysics Track) - Bachelor of Science
Physics Area (Computational Physics Track) - Bachelor of Science
Physics Area (Engineering Physics Electrical Track) - Bachelor of Science
Physics Area (Engineering Physics Mechanical Track) - Bachelor of Science
Physics Area (MSUTeach Track) - Bachelor of Science
Space Systems Engineering Area – Bachelor of Science

This is a ☒ required course. This is an ☐ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

PHYS 231. Engineering Physics I. (4-2-5) Fall; Introduction to physics for scientists and engineers. Topics include concepts of mechanics, encompassing both kinematics and dynamics, Newton's laws of motion, work and energy, impulse and momentum, gravitational fields, rotational kinematics and dynamics, and torque. Additional topics include fluid dynamics, thermodynamics, waves and sound. Corequisite: MATH 275 and PHYS 231L

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The objective of this course revision proposal is to integrate the current courses PHYS 231 and PHYS 231A into a single course, a lecture with an associated required laboratory component. This integration will eliminate issues with students taking introductory physics course lectures and labs in different semesters. The goals of this course are unchanged.

B. Justify the proposed instructional level (100-600) or instructional level change.

As a introductory survey course, PHYS 231 is concept rich and mathematically rigorous, a direct application of MATH 175 and MATH 275. This level of mathematical understanding put it beyond the scope of a 100-level course.

C. List the student learning outcomes for the course.

1. Students will be able to apply the kinematic equations to analyze the motion of macroscopic objects.
2. Students will be able to perform a force analysis on a system using Newton's laws.
3. Students will be able to analyze a system using energy and momentum conservation.
4. Students will be able to apply conservation of angular momentum and use rotational kinematics to analyze rotating objects.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

1. Students will work problems for homework, scored by a rubric.
2. Students will complete in-class exams, scored by a rubric

E. Define how the course helps students to achieve learning objectives required for the program.

This course is intended for students who are pursuing a degree in physics or engineering. It introduces critical thinking and core concepts that they will continually revisit at more advanced levels as they move through a physics or engineering related degree.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The goals and outcomes proposed by PHYS 231 directly support the commitment to student success and high quality education outlined in the University's mission statement. This course is intended for students majoring in physics and engineering, and lays a foundation that they will build their education on.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

None

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Dept. of Mathematics

- Mathematics Area (General Track) – Bachelor of Science
- Mathematics Area (MSUTeach Track) – Bachelor of Science

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Christopher Schroeder, Chair, Dept. of Mathematics (email)

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external adjunct faculty, if appropriate.

None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.
Section size: 49, anticipated enrollment: 49

B. Desired implementation date for the course.
Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
Lecture and Laboratory

D. Additional facilities and special equipment needs for this course, if any.
None

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?
Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Department of Physics, Earth Science and Space Systems Engineering

PHYS 231: Engineering Physics I
Fall 2019 Syllabus

Instructor:	Dr. Kevin Adkins
Lecture location:	LAH 206
Lecture time:	MTWTh 11:00 – 11:50 am
Email:	jkadkins@moreheadstate.edu
Office phone:	606-783-2918
Office location:	LAH 205A
Office Hours:	M – F: 10:00 – 11:00 am, or anytime my door is open Email me to arrange additional meeting times

Course Catalog Description: PHYS 231. Engineering Physics I. (4-2-5) Fall: Introduction to physics for scientists and engineers. Topics include concepts of mechanics, encompassing both kinematics and dynamics, Newton's laws of motion, work and energy, impulse and momentum, gravitational fields, rotational kinematics and dynamics, and torque. Additional topics include fluid dynamics, thermodynamics, waves and sound. Corequisite: Math 275 and PHYS 231L

Course Objectives:

1. You will be able to apply the kinematic equations to analyze the motion of macroscopic objects.
2. You will be able to perform a force analysis on a system using Newton's laws.
3. You will be able to analyze a system using energy and momentum conservation.
4. You will be able to apply conservation of angular momentum and use rotational kinematics to analyze rotating objects.

Required Course Materials: Textbook and WebAssign access
Text: Physics for Scientists and Engineers, 10th ed., Serway & Jewitt
WebAssign and the textbook are included in Cengage Unlimited, a subscription that gives you access to all your Cengage access codes and online textbooks. No matter how many Cengage products you use, they are included in Cengage Unlimited and the price stays the same. You can purchase access to Cengage Unlimited in the bookstore, or at www.cengage.com.

Attendance Policy: University Administrative Regulation (UAR) 131.05 states that "prompt and regular class attendance is the responsibility of all students. Students should be aware that excessive absenteeism, whether excused or unexcused, may affect their ability to earn a passing grade." You are expected to observe this policy. In the event of an absence, it is your responsibility to learn the missed material and obtain the missed notes and assigned homework.

Grading: Final grades will be calculated according to this weighting scheme

Laboratory Grade:	15%
WebAssign Homework:	20%
Exams (5):	65%
Total:	100%

Your final letter grade will be assigned according to:

A: 90% - 100%, B: 80% - 89.99%, C: 70% - 79.99%, D: 60% - 69.99%, E Below 60%

Laboratory Grade: The laboratory portion of this course is your opportunity to physically interact with the phenomena presented during lecture. Your grade in the lab will be based on your performance on the weekly activities that will completed and handed in during your scheduled lab period. Each lab activity is worth a total of ten (10) points, and your total cumulative score for the semester will be factored into your final course grade. You must receive passing grades in BOTH the lecture and lab to pass the course!

Missing more than two (2) lab sessions without an excuse will result in a failing grade for your laboratory grade. You may make up only one (1) unexcused absence during the lab make-up week offered the week before final exams.

WebAssign Homework: Homework problems give you the chance to hone your understanding by practicing the concepts that are presented in the lecture. There will be a variety of problems in the homework, and some exam problems will be based on these problems. **Assignments are due by 11:59 pm on the specified due date announced in class and on WebAssign.**

Exams: There will be a total of FIVE exams that will be based on the lecture material and homework. You may use a calculator on the exams, however you may NOT use any other electronic device in any way on the exams.

If you miss an exam, a make-up exam will be given with a valid excuse. The university policy on excused absences can be found in University Administrative Regulation 131.05. Make-up exams must be arranged as soon as possible after the exam, and must be taken within 48 hours of the original exam outside of class.

Academic Honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA): Americans with Disabilities Act (ADA) Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

Campus Safety Statement: Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: https://www.moreheadstate.edu/emergency.

Tentative Schedule & Important Dates

Week Of	Chapter: Topic	Exams
8/22/19	1: Physics & Measurement, 2: Motion in 1-Dimension	
8/26/19	3: Vectors	
9/2/19	4: Motion in 2-Dimensions	
9/9/19	5: The Laws of Motion	Exam I
9/16/19	6: Circular Motion & Other Applications of Newton's Laws	
9/23/19	6: Circular Motion & Other Applications of Newton's Laws	
9/30/19	7: Energy of a System	Exam II
10/7/19	8: Conservation of Energy	
10/14/19	9: Linear Momentum & Collisions	
10/21/19	10: Rotation of Rigid Bodies	Exam III
10/28/19	10: Rotation of Rigid Bodies, 11: Angular Momentum	
11/4/19	11: Angular Momentum	
11/11/19	13: Universal Law of Gravity	
11/18/19	14: Fluids	Exam IV
11/25/19	14: Fluids	
12/2/19	15-17: Selected topics in waves and oscillations	
12/9/19	Final Exam: TBA	Exam V

Holidays and Breaks:

Labor Day: Sept. 2

Fall Break: Oct. 10 – 11

Thanksgiving Break: Nov. 27 - 29

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 231L: Engineering Physics I Lab
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

( ) Approved ( ) Disapproved

Department Chair or Associate Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

College Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

( ) Approved ( ) Disapproved

Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: **(as listed in current catalog)**	PHYS 231L: Engineering Physics I Lab
Department: **(as listed in current catalog)**	Physics, Earth Science and Space Systems Engineering
College: **(as listed in current catalog)**	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	If an Information Technology signature is required, it has been obtained.	☐
☐	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The course description EXACTLY matches the course description stated in the syllabus.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	If the course requires the use of live animals, the IACUC form is attached.	☐
☐	The syllabus starts on a separate page.	☐
☐	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☐
☐	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☐	The syllabus contains the academic term with date.	☐
☐	The syllabus contains the instructor's name.	☐
☐	The syllabus contains the office location.	☐

☐	The syllabus contains the instructor's office phone number and office hours schedule.	☐
☐	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☐
☐	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☐
☐	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☐
☐	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☐
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☐	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☐
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☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) Approval Date

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)						
Proposed Course Name	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
	PHYS	231L	Engineering Physics I Lab	0-2-1	1.47	Fall

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

Mathematics Area (General Track) – Bachelor of Science
Mathematics Area (MSUTeach Track) – Bachelor of Science
Physics Major (Professional Physics Track) - Bachelor of Science
Physics Major (Applied Physics Track) - Bachelor of Science
Physics Area (Astrophysics Track) - Bachelor of Science
Physics Area (Computational Physics Track) - Bachelor of Science
Physics Area (Engineering Physics Electrical Track) - Bachelor of Science
Physics Area (Engineering Physics Mechanical Track) - Bachelor of Science
Physics Area (MSUTeach Track) - Bachelor of Science
Space Systems Engineering Area – Bachelor of Science

This is a ☒ **required course. This is an** ☐ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

PHYS 231L. Engineering Physics I Lab. (0-2-1) Fall; Laboratory component for PHYS 231.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The objective of this proposal is to create the new course PHYS 231L which will accompany our updated integration of the lab component into the lecture component for PHYS 231.

B. Justify the proposed instructional level (100-600) or instructional level change.

This laboratory component accompanies the lecture course at the same level.

C. List the student learning outcomes for the <u>course</u>.

1. Students will be able to make measurements using standard lab equipment.
2. Students will be able to estimate and propagate uncertainties for your final results.
3. Students will be able to make connections between the lecture material and the real world.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

Students will complete weekly lab activities and submit their findings on a set of worksheets before they leave class at each meeting, scored by rubric

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

This course promotes critical thinking and fosters an understanding of the world around us. Both of these are particularly important skills for all science related fields.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The goals and outcomes proposed by this course directly support the commitment to student success and high quality education outlined in the University's mission statement. This laboratory component further develops critical thinking skills gives the hands-on experience many students need to help solidify the concepts they are studying.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

None

C. List departments and programs that could be impacted by this proposal. For example, any department that:

a. requires the course
b. offers the course as an elective
c. offers a similar course
d. has an equated course
e. has the course listed as a co-requisite or pre-requisite
f. shares staff and/or resources

Dept. of Mathematics

- Mathematics Area (General Track) – Bachelor of Science
- Mathematics Area (MSUTeach Track) – Bachelor of Science

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Christopher Schroeder, Chair, Dept. of Mathematics (email)

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external adjunct faculty, if appropriate.

None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

24, 48

B. Desired implementation date for the course.

Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

Laboratory

D. Additional facilities and special equipment needs for this course, if any.

None

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Dept. of Physics, Earth Science & Space Systems Engineering

PHYS 231L: Elementary Physics I Lab
Fall 2019

Instructor: Dr. Kevin Adkins Office: Lappin 205A
Phone: 3-2918
Email: jkadkins@moreheadstate.edu

Office Hours: M – F: 10:00 – 11:00 am, or anytime my door is open
Email me to arrange additional meeting times

Course Catalog Description:
PHYS 231L. Engineering Physics I Lab. (0-2-1) Fall; Laboratory component for PHYS 231.

Course Objectives:
1. You will be able to make measurements using standard lab equipment.
2. You will be able to estimate and propagate uncertainties for your final results.
3. You will be able to make connections between the lecture material and the real world.

Completing Laboratories: Plan to complete your lab work in the 1 hour and 50 minute time allotted. You will turn in your work at the completion of the lab, so be sure to work at a consistent pace. Make sure that you read the lab over before you arrive to ensure that you and your group can complete the lab in the allotted time.

Attendance Policy: Attendance to the lab is **mandatory.** Missing **more than** two unexcused lab meetings during the semester will result in an automatic failure for the laboratory component. You must pass **both** the laboratory component and the lecture component to pass the course.

Missed Laboratories: In the event that you miss a laboratory during the course of the term, you can make it up during the make-up week at the end of the term. **Only one make-up lab is allowed during the make-up week.**

Grading Procedures: All labs worksheets are worth 10 points and will be graded for accuracy. In order to receive full credit work must be clear and complete. You must fill out labs in PENCIL. **Labs done in pen will be docked by 2 points.**

Grade Scale:

A	**90 to 100%**
B	**80 to < 90%**
C	**70 to < 80%**
D	**60 to < 70%**
E	**< 60%**

Physics 231L: Weekly Lab Schedule

Week of	Scheduled Lab
8/19/2019	0. Introduction to LabQuest II
8/26/2019	1. Velocity & Acceleration
9/2/2019	2. Measurement Uncertainty
9/9/2019	3. Determining g with Free fall
9/16/2019	4. Vector Addition
9/23/2019	5. Newton's 2nd & 3rd Laws
9/30/2019	6. Atwood Machine
10/7/19	7. Centripetal Acceleration
10/14/2019	8. Horse Power
10/21/2019	9. Energy & Its Conservation
10/28/2019	10. Momentum
11/4/2019	11. Torque
11/11/2019	12. Bouyant Force
11/18/2019	13. Hooke's Law
11/25/2019	Thanksgiving Holiday – No Labs
12/2/2019	Makeup Lab: Speed of Sound

Campus Safety Statement
Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

Academic honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA)
Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

Please insert (paste) any supporting documentation (email correspondence, IACUC form, etc.) here and remove this statement.

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 232: Engineering Physics II
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

Thomas Pannuti Thomas Pannuti 10/28/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

ERIC JEROE (X) Approved ( ) Disapproved 10/28/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUPE (X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

WAYNE MILLER (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corley Laurie Corley ( ) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 1-27-20

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	PHYS 232: Engineering Physics II
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

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Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
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☒	Responses are complete and applicable for each question.	☒
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☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Ignacio Birriel — Approval Date: 10/28/19

Department Curriculum Committee Chair (Sign and Print) — Thomas Pannuti — Approval Date: 10/28/19

COURSE

New Course or Major Revision to Existing Course

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I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
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  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ New Course ☒ Revised Course

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)	PHYS	232	Engineering Physics II	4-0-4	4.00	Spring
Proposed Course Name	PHYS	232	Engineering Physics II	4-2-5	5.47	Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

Mathematics Area (General Track) – Bachelor of Science
Mathematics Area (MSUTeach Track) – Bachelor of Science
Physics Major (Professional Physics Track) - Bachelor of Science
Physics Major (Applied Physics Track) - Bachelor of Science
Physics Area (Astrophysics Track) - Bachelor of Science
Physics Area (Computational Physics Track) - Bachelor of Science
Physics Area (Engineering Physics Electrical Track) - Bachelor of Science
Physics Area (Engineering Physics Mechanical Track) - Bachelor of Science
Physics Area (MSUTeach Track) - Bachelor of Science
Space Systems Engineering Area – Bachelor of Science

This is a ☒ required course. This is an ☐ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

PHYS 232. Engineering Physics II. (4-2-5) Spring; Introduction to physics for scientists and engineers. A continuation of PHYS 231. Topics include electric charge and forces on charged particles, electric fields, Gauss's law, magnetic fields, Ampere's law, resistance, capacitance, electric potential, Ohm's law, Kirchhoff's rules, EMF, Lenz's law, Maxwell's equations, electromagnetic waves, the nature of light, Snell's law and geometric optics. Additional topics include nuclear and atomic physics.
Prerequisite: "C" or better in PHYS 231
Corequisite: PHYS 232L

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The objective of this course revision proposal is to integrate the current courses PHYS 232 and PHYS 232A into a single course, a lecture with an associated required laboratory component. This integration will eliminate issues with students taking introductory physics course lectures and labs in different semesters. The goals of this course are unchanged.

B. Justify the proposed instructional level (100-600) or instructional level change.

As a introductory survey course, PHYS 232 is concept rich and mathematically rigorous, a direct application of MATH 175 and

MATH 275. This level of mathematical understanding put it beyond the scope of a 100-level course.

C. List the student learning outcomes for the course.

1. Students will be able to understand and calculate electric fields due to continuous charge distributions.
2. Students will be able identify DC circuit elements and analyze simple circuits using Kirchhoff's rules.
3. Students will be able to identify sources of and calculate magnetic fields.
4. Students will be able to make calculations related to reflection and refraction of light.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or** 2. Students will complete an exam; objective test.

1. Students will work problems for homework, scored by a rubric.
2. Students will complete in-class exams, scored by a rubric

E. Define how the course helps students to achieve learning objectives required for the program.

This course is intended for students who are pursuing a degree in physics or engineering. It introduces critical thinking and core concepts that they will continually revisit at more advanced levels as they move through a physics or engineering related degree.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The goals and outcomes proposed by PHYS 232 directly support the commitment to student success and high quality education outlined in the University's mission statement. This course is intended for students majoring in physics and engineering, and lays a foundation that they will build their education on.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

None

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Dept. of Mathematics

- Mathematics Area (General Track) – Bachelor of Science
- Mathematics Area (MSUTeach Track) – Bachelor of Science

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Christopher Schroeder, Chair, Dept. of Mathematics (email)

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external adjunct faculty, if appropriate.

None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.
49, 49

B. Desired implementation date for the course.
Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).
Lecture and Laboratory

D. Additional facilities and special equipment needs for this course, if any.
None

E. Use of library resources
It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?
Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Department of Physics, Earth Science and Space Systems Engineering

PHYS 232: Engineering Physics II
Fall 2019 Syllabus

Instructor:	Dr. Kevin Adkins
Lecture location:	LAH 206
Lecture time:	MTWTh 11:00 – 11:50 am
Email:	jkadkins@moreheadstate.edu
Office phone:	606-783-2918
Office location:	LAH 205A
Office Hours:	M – F: 10:00 – 11:00 am, or anytime my door is open Email me to arrange additional meeting times

Course Catalog Description: PHYS 232. Engineering Physics II. (4-2-5) Fall; Introduction to physics for scientists and engineers. A continuation of PHYS 231. Topics include electric charge and forces on charged particles, electric fields, Gauss's law, magnetic fields, Ampere's law, resistance, capacitance, electric potential, Ohm's law, Kirchhoff's rules, EMF, Lenz's law, Maxwell's equations, electromagnetic waves, the nature of light, Snell's law and geometric optics. Additional topics include nuclear and atomic physics.
Prerequisite: "C" or better in PHYS 231
Corequisite: PHYS 232A

Course Objectives:

1. You will be able to understand and calculate electric fields due to continuous charge distributions.
2. You will be able identify DC circuit elements and analyze simple circuits using Kirchhoff's rules.
3. You will be able to identify sources of and calculate magnetic fields.
4. You will be able to make calculations related to reflection and refraction of light.

Required Course Materials: Textbook and WebAssign access
Text: Physics for Scientists and Engineers, 10th ed., Serway & Jewitt

WebAssign and the textbook are included in Cengage Unlimited, a subscription that gives you access to all your Cengage access codes and online textbooks. No matter how many Cengage products you use, they are included in Cengage Unlimited and the price stays the same. You can purchase access to Cengage Unlimited in the bookstore, or at www.cengage.com.

Attendance Policy: University Administrative Regulation (UAR) 131.05 states that "prompt and regular class attendance is the responsibility of all students. Students should be aware that excessive absenteeism, whether excused or unexcused, may affect their ability to earn a passing grade." You are expected to observe this policy. In the event of an absence, it is your responsibility to learn the missed material and obtain the missed notes and assigned homework.

Grading: Final grades will be calculated according to this weighting scheme

Laboratory Grade:	15%
WebAssign Homework:	20%
Exams (5):	65%
Total:	100%

Your final letter grade will be assigned according to:

A: 90% - 100%, B: 80% - 89.99%, C: 70% - 79.99%, D: 60% - 69.99%, E Below 60%

Laboratory Grade: The laboratory portion of this course is your opportunity to physically interact with the phenomena presented during lecture. Your grade in the lab will be based on your performance on the weekly activities that will completed and handed in during your scheduled lab period. Each lab activity is worth a total of ten (10) points, and your total cumulative score for the semester will be factored into your final course grade. You must receive passing grades in BOTH the lecture and lab to pass the course!

Missing more than two (2) lab sessions without an excuse will result in a failing grade for your laboratory grade. You may make up only one (1) unexcused absence during the lab make-up week offered the week before final exams.

WebAssign Homework: Homework problems give you the chance to hone your understanding by practicing the concepts that are presented in the lecture. There will be a variety of problems in the homework, and some exam problems will be based on these problems. **Assignments are due by 11:59 pm on the specified due date announced in class and on WebAssign.**

Exams: There will be a total of FIVE exams that will be based on the lecture material and homework. You may use a calculator on the exams, however you may NOT use any other electronic device in any way on the exams.

If you miss an exam, a make-up exam will be given with a valid excuse. The university policy on excused absences can be found in University Administrative Regulation 131.05. Make-up exams must be arranged as soon as possible after the exam, and must be taken within 48 hours of the original exam outside of class.

Academic Honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA): Americans with Disabilities Act (ADA) Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

Campus Safety Statement: Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: https://www.moreheadstate.edu/emergency.

Tentative Schedule & Important Dates

Week Of	Chapter: Content	Exams
8/22/19	22: Electric Charge, Coulomb's Law, Electric Fields	
8/26/19	23: Electric Fields of Charge Distributions, Gauss's Law	
9/2/19	24: Electric Potential, Equipotentials, Conductors	
9/9/19	25: Capacitance, Capacitors, Dielectrics	Exam I
9/16/19	26: Electric Current, Resistance, Ohm's Law	
9/23/19	27: Combining Resistors, Kirchhoff's Rules, RC Circuits	
9/30/19	28: Magnetism, Magnetic Fields, Magnetic Force	Exam II
10/7/19	29: Biot-Savart Law, Ampere's Law, Solenoids	
10/14/19	29: Biot-Savart Law, Ampere's Law, Solenoids	
10/21/19	30: Faraday's Law, Lenz's Law	
10/28/19	31: Inductance, RL Circuits	Exam III
11/4/19	33: Maxwell's Equations, EM Waves	
11/11/19	34: Light: Reflection, Refraction, Snell's Law	
11/18/19	35: Optics: Plane and Spherical Mirrors	Exam IV
11/25/19	35: Optics: Thin Lenses, 36: Interference: Double Slit	
12/2/19	37: Diffraction: Single/Double Slit, Polarization	
12/9/19	Final Exam: TBA	Exam V

Holidays and Breaks:
Labor Day: Sept. 2
Fall Break: Oct. 10 – 11
Thanksgiving Break: Nov. 27 - 29

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 232L: Engineering Physics II Lab
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

( ) Approved ( ) Disapproved

Department Chair or Associate Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

College Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

( ) Approved ( ) Disapproved

Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: **(as listed in current catalog)**	PHYS 232L: Engineering Physics II Lab
Department: **(as listed in current catalog)**	Physics, Earth Science and Space Systems Engineering
College: **(as listed in current catalog)**	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	If an Information Technology signature is required, it has been obtained.	☐
☐	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The course description EXACTLY matches the course description stated in the syllabus.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	If the course requires the use of live animals, the IACUC form is attached.	☐
☐	The syllabus starts on a separate page.	☐
☐	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☐
☐	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☐	The syllabus contains the academic term with date.	☐
☐	The syllabus contains the instructor's name.	☐
☐	The syllabus contains the office location.	☐

☐	The syllabus contains the instructor's office phone number and office hours schedule.	☐
☐	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☐
☐	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☐
☐	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☐
☐	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☐
☐	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☐
☐	The syllabus contains a grading description and distribution (please be very specific).	☐
☐	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☐
☐	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☐
☐	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☐
☐	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☐
☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) Approval Date

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)						
Proposed Course Name	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
	PHYS	232L	Engineering Physics II Lab	0-2-1	1.47	Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

Mathematics Area (General Track) – Bachelor of Science
Mathematics Area (MSUTeach Track) – Bachelor of Science
Physics Major (Professional Physics Track) - Bachelor of Science
Physics Major (Applied Physics Track) - Bachelor of Science
Physics Area (Astrophysics Track) - Bachelor of Science
Physics Area (Computational Physics Track) - Bachelor of Science
Physics Area (Engineering Physics Electrical Track) - Bachelor of Science
Physics Area (Engineering Physics Mechanical Track) - Bachelor of Science
Physics Area (MSUTeach Track) - Bachelor of Science
Space Systems Engineering Area – Bachelor of Science

This is a ☒ **required course. This is an** ☐ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

PHYS 232L. Engineering Physics II Lab. (0-2-1) Spring; Laboratory component for PHYS 232.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The objective of this proposal is to create the new course PHYS 232L which will accompany our updated integration of the lab component into the lecture component for PHYS 232.

B. Justify the proposed instructional level (100-600) or instructional level change.

This laboratory component accompanies the lecture course at the same level.

C. List the student learning outcomes for the <u>course</u>.

1. Students will be able to make measurements using standard lab equipment.
2. Students will be able to estimate and propagate uncertainties for your final results.
3. Students will be able to make connections between the lecture material and the real world.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

Students will complete weekly lab activities and submit their findings on a set of worksheets before they leave class at each meeting, scored by rubric

E. Define how the course helps students to achieve learning objectives required for the <u>program</u>.

This course promotes critical thinking and fosters an understanding of the world around us. Both of these are particularly important skills for all science related fields.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The goals and outcomes proposed by this course directly support the commitment to student success and high quality education outlined in the University's mission statement. This laboratory component further develops critical thinking skills gives the hands-on experience many students need to help solidify the concepts they are studying.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

None

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

None

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Dept. of Mathematics

- Mathematics Area (General Track) – Bachelor of Science
- Mathematics Area (MSUTeach Track) – Bachelor of Science

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Christopher Schroeder, Chair, Dept. of Mathematics (email)

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external adjunct faculty, if appropriate.

None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

24, 48

B. Desired implementation date for the course.

Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

Laboratory

D. Additional facilities and special equipment needs for this course, if any.

None

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Dept. of Physics, Earth Science & Space Systems Engineering

PHYS 232L: Engineering Physics II Lab
Fall 2019

Instructor: Dr. Kevin Adkins Office: Lappin 205A
Phone: 3-2918
Email: jkadkins@moreheadstate.edu

Office Hours: M – F: 10:00 – 11:00 am, or anytime my door is open
Email me to arrange additional meeting times

Course Catalog Description:
PHYS 232L. Engineering Physics II Lab. (0-2-1) Spring; Laboratory component for PHYS 232.

Course Objectives:
1. You will be able to make measurements using standard lab equipment.
2. You will be able to estimate and propagate uncertainties for your final results.
3. You will be able to make connections between the lecture material and the real world.

Completing Laboratories: Plan to complete your lab work in the 1 hour and 50 minute time allotted. You will turn in your work at the completion of the lab, so be sure to work at a consistent pace. Make sure that you read the lab over before you arrive to ensure that you and your group can complete the lab in the allotted time.

Attendance Policy: Attendance to the lab is **mandatory.** Missing **more than** two unexcused lab meetings during the semester will result in an automatic failure for the laboratory component. You must pass **both** the laboratory component and the lecture component to pass the course.

Missed Laboratories: In the event that you miss a laboratory during the course of the term, you can make it up during the make-up week at the end of the term. **Only one make-up lab is allowed during the make-up week.**

Grading Procedures: All labs worksheets are worth 10 points and will be graded for accuracy. In order to receive full credit work must be clear and complete. You must fill out labs in PENCIL. **Labs done in pen will be docked by 2 points.**

Grade Scale:

A	**90 to 100%**
B	**80 to < 90%**
C	**70 to < 80%**
D	**60 to < 70%**
E	**< 60%**

Physics 232L: Weekly Lab Schedule

Week of	Scheduled Lab
8/19/2019	NO LAB
8/26/2019	1. Coulomb's Law
9/2/2019	2. Equipotential Lines
9/9/2019	3. Intro to the Digital Multi-meter
9/16/2019	4. Resistance Measurements
9/23/2019	5. DC Circuits
9/30/2019	6. Capacitance & RC Circuits
10/7/19	7. Magnetic Fields
10/14/2019	8. Current Balance
10/21/2019	9. Earth's Magnetic Field
10/28/2019	10. Lenz's and Faraday Laws
11/4/2019	11. Reflection 7 Refraction
11/11/2019	12. Thin Lenses & Mirrors
11/18/2019	13. Diffraction
11/25/2019	Thanksgiving Holiday – No Labs
12/2/2019	Makeup Lab: Polarization

Campus Safety Statement
Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

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Americans with Disabilities Act (ADA)
Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

Please insert (paste) any supporting documentation (email correspondence, IACUC form, etc.) here and remove this statement.

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 270: Introduction to Scientific Computing to PHYS 181
Department: (as listed in current catalog)	Physics, Earth Science, & Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

Thomas Pannuti Thomas Pannuti 10/28/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Eric Jerde ERIC JERDE (X) Approved ( ) Disapproved 10/28/19

Department Chair or Associate Dean (Sign and Print) Date

(X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

Wayne Miller WAYNE MILLER (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 12/16/19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	PHYS 270: Introduction to Scientific Computing
Department: (as listed in current catalog)	Physics, Earth Science, & Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	If an Information Technology signature is required, it has been obtained.	☒
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The course title, department, and college names correspond to the current catalog.	☒
☒	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The course description EXACTLY matches the course description stated in the syllabus.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☒	Responses are complete and applicable for each question.	☒
☒	If the course requires the use of live animals, the IACUC form is attached.	☒
☒	The syllabus starts on a separate page.	☒
☒	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☒
☒	The syllabus contains the course title and course number (exactly as listed in the proposal).	☐
☒	The syllabus contains the academic term with date.	☒
☒	The syllabus contains the instructor's name.	☐
☒	The syllabus contains the office location.	☒

☒	The syllabus contains the instructor's office phone number and office hours schedule.
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.
☒	The syllabus contains a grading description and distribution (please be very specific).
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.
☒	The entire proposal is saved as one Word document.

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Ignacio Birriel — 10/28/19

Originator (Sign and Print) — Approval Date

Thomas Pannuti — 10/28/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☐ New Course ☒ Revised Course

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)	PHYS	270	Introduction to Scientific Computing	3-0-3	3.00	Fall
Proposed Course Name	PHYS	181	Introduction to Scientific Computing	2-2-3	3.47	Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)

Physics Major (Professional Physics Track) - Bachelor of Science
Physics Major (Applied Physics Track) - Bachelor of Science
Physics Area (Astrophysics Track) - Bachelor of Science
Physics Area (Computational Physics Track) - Bachelor of Science
Physics Area (Engineering Physics Electrical Track) - Bachelor of Science
Physics Area (Engineering Physics Mechanical Track) - Bachelor of Science
Physics Area (MSUTeach Track) - Bachelor of Science

This is a ☒ required course. This is an ☐ elective course.

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

Physics 181. Introduction to Scientific Computing. (2-2-3) Spring; An introductory computing course emphasizing fundamental computing tools and techniques, and their application to solving scientific problems. Topics include generating algorithms for solving problems, understanding C++ syntax, writing and modifying C++ programs in the context of solving scientific problems, and analyzing program output. Pre-requisites: C or better in PHYS 101; C or better in MATH 152 or a minimum ACT math score of 22..

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

The goals and objectives of this course are to offer physics majors and areas the computational skills required to be successful in the fields of physics and engineering physics. Students will learn fundamental C++ syntax and programming skills that will be directly applied to solving problems specific to the physics discipline.

Students find programming to solve physics problems difficult without guidance in the application of the programming . The course contact hours are being changed from 3 lecture hours to 2 lecture hours and a 1 hr and 50 minute laboratory session. Students would benefit from having a laboratory experience during which they are guided by the faculty member in the process of design and implementation of C++ programs for solving problems in physics. The two lecture sessions will introduce the basic sytnax and programming concepts and the laboratory session will be used to implement programming solutions to specific physics

problems.

B. Justify the proposed instructional level (100-600) or instructional level change.

Students will take this course as a second semester freshman; therefore, the instuctional level of 100 is appropriate.

C. List the student learning outcomes for the course.

1. Students will be able to break a science problem down into a set of steps for a computer to follow and report a solution.
2. Students will be able to use the correct syntax and terminology of C++ programming.
3. Students will understand the general flow and composition of a C++ program.
4. Students will be able to modify and write basic scientific programs in C++ that will compile and run without errors.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

Students will be assessed via
1. Laboratory Exercises; graded worksheets
2. Homework and Quizzes; scored by a rubric
3. Programming Exams; scored by a rubric

E. Define how the course helps students to achieve learning objectives required for the program.

One of the learning objectives for the Physics Majors and Areas is
"Develop enough learning techniques to adapt to new vocational and educational situations, i.e. be able to self-educate in new applied areas and keep up with progress in the field."

As physicists, new problems arise every day and most of these problems cannot be solved analytically. As such, computational solutions to these problems must be employed. This redesigned course will help students develop the computational skills and computational learning techniques that can be applied to both old and new problems in the field of physics.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

The goals and outcomes proposed by PHYS 181 directly support the commitment to student success and high quality education outlined in the University's mission statement. Students in physics need to be fluent in programming and its application to solving problems in engineering. Physics 181 will be their first step in learning to solve physics problems using computational tools. This course will serve as a foundation for all subsequent coursework in physics.

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

PHYS 270: Introduction to Scientific Computing

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

This course does not duplicate any course. There is some superficial overlap with CIS 205: Introduction to C++ in that both courses introduce C++ syntax but PHYS 181, like PHYS 270, exclusively examines solving problems in physics and engineering.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Computer Science & Electronics

CS 270 is cross-listed with PHYS 270 but PHYS 270 was developed by the Physics faculty back in the late 1990s as a course to prepare students for 2-2 and 3-2 transfers to the University of KY's engineering programs. The course has always been taught by Physics faculty. The course was cross-listed back in 2008 when Computer Science resided in the same deparment as Physics and Mathematics to facilitate situations in which students majored in physics and minored in CS. CS 270 is not required for any CS degrees. PHYS 270 is a required course for all Physics majors and physics areas.

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Ahmad Zargari, Associate Dean, School of Engineering and Computer Science (email)

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics

B. Identify external adjunct faculty, if appropriate.

None

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

19, 19

B. Desired implementation date for the course.

Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

Lectures and Laboratory

D. Additional facilities and special equipment needs for this course, if any.

None

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ **No**

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
College of Science
Department of Physics, Earth Science and Space Systems Engineering

PHYS 181: Introduction to Scientific Computing
Spring 2020 Syllabus

Instructor: Dr. Kevin Adkins
Lecture location: LAH 129
Lecture time: MWF 8:00 – 8:50 am
Email: jkadkins@moreheadstate.edu
Office phone: 606-783-2918
Office location: LAH 205A
Office Hours: M – F: 10:00 – 11:00 am, or anytime my door is open
Email me to arrange additional meeting times

Course Catalog Description: Physics 181. Introduction to Scientific Computing. (2-2-3) Spring; An introductory computing course emphasizing fundamental computing tools and techniques, and their application to solving scientific problems. Topics include generating algorithms for solving problems, understanding C++ syntax, writing and modifying C++ programs in the context of solving scientific problems, and analyzing program output. Pre-Requisites: C or better in PHYS 101; C or better in MATH 152 or a minimum ACT math score of 22**.**

Course Objectives:
1. You will be able to break a science problem down into a set of steps for a computer to follow and report a solution.
2. You will be able to use the correct syntax and terminology of C++ programming.
3. You will understand the general flow and composition of a C++ program.
4. You will be able to modify and write basic scientific programs in C++ that will compile and run without errors.

Required Textbook: *Engineering Problem Solving with C++, 4th ed.*, Etter & Ingber. ISBN: 9780134444291

Attendance Policy: University Administrative Regulation (UAR) 131.05 states that "Prompt and regular class attendance is the responsibility of all students. Students should be aware that excessive absenteeism, whether excused or unexcused, may affect their ability to earn a passing grade." Your presence in class and engagement with the lecture material and exercises is crucial for your success. For this reason, attendance will be taken and will contribute to your final course grade.

Grading: Final grades will be calculated according to this weighting scheme

Attendance:	5%
Laboratory Exercises:	15%
Online Quizzes & Homework	20%
Exams (3):	60%
Total:	100%

Your final letter grade will be assigned according to:

A: 90% - 100%, B: 80% - 89.99%, C: 70% - 79.99%, D: 60% - 69.99%, E Below 60%

Homework: The homework will be assigned on and available through Blackboard. These assignments should be submitted before the specified deadline. Late homework will not be accepted.

Online Quizzes: Quizzes will be given on Blackboard and will be found at the end of each unit of material that we cover in the course.

Exams: There will be three exams given in the course, given during one of our class meetings. The use of books and "cheat sheets" will not be allowed while taking the exams (i.e. closed book and closed notes). The format for the exams will be discussed in class as we approach the first exam. If you miss an exam, a make-up exam will be given with a valid excuse. The university policy on excused absences can be found in University Administrative Regulation 131.05. Make-up exams must be arranged as soon as possible after the exam, and must be taken within 48 hours of the original exam outside of class.

In-Class Exercises: We will frequently dedicate class meetings to work exercises that reflect the current homework and upcoming exam material. These exercises are your chance to interact with your classmates and me as you solve problems and learn C++ syntax. If you are not present for an in-class exercise, and you have no formal excuse, you will receive a score of zero for that exercise.

Tentative Schedule & Important Dates

Week Of	Book Sections: Content	Exams
1/13/20	Ch. 1: Introduction to computing and problem solving	
1/20/20	Ch. 2: Program structure and data types	
1/27/20	Ch. 2: Operators and standard input/output	
2/3/20	Ch. 2: Math functions, Booleans & Ch. 3: Program design	
2/10/20	Ch. 3: Conditional expressions and logic	**Exam I**
2/17/20	Ch. 3: Selection statements	
2/24/20	Ch. 4: Pseudocode algorithms and repetition	
3/2/20	Ch. 4: for, while & do-while loops	
3/9/20	Ch. 4: Controlling loops with break and continue	
3/16/20	**SPRING BREAK!**	
3/23/20	Ch. 5: File streams, ofstream and ifstream	**Exam II**
3/30/20	Ch. 5: Methods for reading data files	
4/6/20	Ch. 5: Generating data files	
4/13/20	Ch. 6: Modularity and programmer defined functions	
4/20/20	Ch. 6: Pass by value and pass by reference	
4/27/20	Ch. 6: Parameter scope and random numbers	
5/4/20	**Final Exam: TBA**	**Exam III**

Academic Honesty: All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Americans with Disabilities Act (ADA): Americans with Disabilities Act (ADA) Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information.

Campus Safety Statement: Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at:

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form
Revised January 2019

Program: (as listed in current catalog)	Physics Area - Bachelor of Science
Department: (as listed in current catalog)	Physics, Earth Science, and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

Thomas Panniti — 10/28/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

ERIC JERDE — (X) Approved ( ) Disapproved — 10/28/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GRUPE — (X) Approved ( ) Disapproved — 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER — (X) Approved ( ) Disapproved — 11/20/2019

Dean (Sign and Print) — Date

Chris Miller — (✓) Approved ( ) Disapproved — 12/6/19

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch — Laurie Couch — (✓) Approved ( ) Disapproved — 12/16/19

Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved — 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Physics Area - Bachelor of Science
Department: (as listed in current catalog)	Physics, Earth Science, and Space Systems Engineering
College: (as listed in current catalog)	Science

Helpful Information:

1. Important Definitions Used in the Curriculum Process
   - Area = a program of study comprised of at least 48 hours
   - Major = a program of study comprised of at least 30 hours, accompanied by a minor
   - Minor = a set of discipline-specific courses of at least 21 hours
   - Certificate = a series of courses related to a specific topic or skill with a prescribed number of hours. For additional information contact the Office of Academic Programs at 783-2003 or email undergraduate@moreheadstate.edu.
   - Core = a set of required courses taken by all students in a specific Area or Major
   - Track = a subset of courses within an area or major designed to develop expertise in a particular topic at the undergraduate level
   - Equated courses vs. cross-listed courses = equated courses are courses of identical content that have different prefixes (and are approved through the undergraduate curriculum process), whereas cross-listed courses have the same instructor and are offered at the same time/location.
   - Pre-requisite = course(s) that a student must successfully complete prior to registering for a more advanced course.
   - Co-requisite = course(s) that a student must take concurrently with another course.
2. An Associate's Degree normally requires at least 60 semester hours including 15 hours of prescribed general education credit.
3. A baccalaureate degree program at the undergraduate level is either an Area or a Major.
4. A program's total credit hours include program core (i.e., courses taken by all students in the program), program supplemental courses (other required hours), and program specific electives. No general education courses or free elective courses count toward total program hours.
5. Curriculum should be designed so that the program's total credit hours plus general education hours and free electives add up to 120 total hours, with 42 of the hours in upper division (i.e., 300- to 400-level) courses.
6. To ensure that students enrolled in a program have common experiences fifty percent (50%) of a program's total credit hours must be made up of core courses.
   Examples:
   a. If an Area is designed with 48 hours, then 24 or more of those hours must be in core courses. The rest of the program hours can be other program requirements that vary from student to student.
   b. If a Major is designed with 30 hours, then 15 or more of those hours must be in core courses. The remainder of the major hours can be other program supplemental courses and program specific electives that vary from student to student. The minor is not considered in calculations for this 50% rule.
   c. If a Major has 30 hours and includes tracks, the core must contain at least the same number (or

higher) of hours as the track. For example, a Major could have 15 hours in core, 9 hours in the track, and 6 hours as program electives.

7. Any proposal with a secondary education component must be routed through the Teacher Education Council.

8. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	If an Information Technology signature is required, it has been obtained.	☒
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The title, department, and college names correspond to the current catalog.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☒
☒	Responses are complete and applicable for each question.	☒
☒	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☒
☒	Each course has been reviewed for pre-requisites, co-requisites or testing requirements. There are no hidden pre-requisites, co-requisites, or testing requirements.	☒
☒	The program core contains at least 50% of the total program hours (not including general education and free elective hours)	☒
☒	The program core does not contain courses that should be listed in other sections of the proposal (i.e. Other Program Required Hours, Program Electives, etc.).	☒
☒	The program has an adequate number of area/major hours (minimum of 48 for area and minimum 30 for major).	☒
☒	The program has at least 42 upper division hours.	☒
☒	If the program is a major, hours are designated for an accompanying minor.	☒
	If the program has tracks, the total track hours do not exceed the total core hours.	
☒	The program has a maximum of 120 hours. If not, sufficient rationale is included in the proposal.	☒
☒	The curriculum maps each start on a separate page.	☒
☒	The curriculum map contains the official name of the program and track (if applicable).	☒
☒	The curriculum map contains accurate course prefix, number, and name for each course.	☒
☒	The curriculum map lists General Education courses in the first two years.	☒

☒	If the program has tracks, a separate curriculum map is included for each track.	☒
☒	The curriculum map contains EXACTLY the same courses and the same number of credit-hours as the proposal.	☒
☒	The curriculum map does not contain hidden pre-requisites or co-requisites.	☒
☒	The curriculum map codes are accurate.	☒
☒	If the program has tracks, a separate curriculum map is included for each track.	☒
☒	The total credit hours for each semester are acceptable (full-time, not overload, etc.).	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Ignacio Barrio — Approval Date: 10/28/19

Department Curriculum Committee Chair (Sign and Print) — Thomas Pannuti — Approval Date: 10/28/19

PROGRAM
Major Revision of Existing Program

The outline below is to be used for program revisions. Each revised or new course included in this program requires a separate "New Course or Major Revision to Existing Course" proposal. *Note: an amended curriculum map must be attached to each "Major Revision of Existing Program" proposal.*

I. EXISTING PROGRAM REVISION

State the current title of the Program (as listed in the current catalog)

Physics Area - Bachelor of Science

List the degree (e.g. Bachelor of Science) and major or area (e.g. Math Major, Biology Area); as listed in the current catalog. Include tracks if applicable (e.g. Bachelor of Arts, Philosophy Major, Religious Studies Track).

Physics Area (Astrophysics Track) - Bachelor of Science
Physics Area (Computational Physics Track) - Bachelor of Science
Physics Area (Engineering Physics Electrical Track) - Bachelor of Science
Physics Area (Engineering Physics Mechanical Track) - Bachelor of Science
Physics Area (MSUTeach Track) - Bachelor of Science

State the proposed revised title of the Program (if applicable)

N/A

If the degree (e.g. Bachelor of Science) and/or major or area (e.g. Math Major, Biology Area) names are changing, please list them below. Include tracks if applicable.

N/A

CIP Code - *Contact your department chair to verify the correct CIP Code information.*

40.0801

II. NEED AND JUSTIFICATON

A. Describe the changes and justify what this proposal is requesting; what are you doing and why are you doing it?

Revisions for the Physics Area include:
Changes to the Core:

- PHYS 105: Introduction to Physics & Engineering Professions has been added to the core. This is a new course, attached is a "New Course or Major Revision to Existing Course" proposal.
- PHYS 231A and 232A: Engineering Physics I and II Lab have been revised to PHYS 231L and 232L: Engineering Physics I and II Lab. This is a new course, attached is a "New Course or Major Revision to Existing Course" proposal.
- PHYS 231 and 232: Engineering Physics I and II have been revised to include the Lab as part of the student evaluation. Attached are "New Course or Major Revision to Existing Course" proposals.
- PHYS 270: Introduction to Scientific Computing has been updated to PHYS 181: Introduction to Scientific Computing. The changes to the course reflect the latest trends in the field. Attached is a "New Course or Major Revision to Existing Course" proposal.

Changes to the Astrophysics Track:

- ASTR 498: Senior Research has been remove to accommodate adding PHYS 105 to the core.

Changes to the Computational Physics Track:

- CIS 205: Introduction to Programming – C++ has been added. This course was a hidden prerequisite in the past.
- MATH 301: Elementary Linear Algebra, CS 310: Algorithms and Advanced Data Structures, PHYS 332: Electricity and Magnetism and PHYS 493: Quantum Mechanics have been added to the track. The changes is to create a sounder program based on current trends in the field and feedback from alumni.
- PHYS 411: Thermodynamics and MATH 312: Numerical Methods have been dropped from the track. The change reflect the latest trends in the field.

Changes to Engineering Physics Mechanical Track:

- MATH 353: Introduction to Statistics, EMM 203 Computer Aided Design I, EMM 303 Mechanics of Material and PHYS 361 Fundamentals of Electronics have been added to the track. The changes are to create a sounder program based on current

trends in the field and feedback from alumni.

- ETM 307: Materials Science has been dropped from the track. The change reflects the latest trends in the field.

Changes to Engineering Physics Electrical Track:

- PHYS 211: Circuits, EMM 203 Computer Aided Design I, PHYS 412: Light and Physical Optics and Math 353 Introduction to Statistics have been added to the track. The changes is to create a sounder program based on current trends in the field and feedback from alumni.

Changes to MSUTeach Track:

- PHYS 350: Nuclear Science and PHYS 412: Light and Physical Optics have been added to the track. These courses have been added as they are more consistent with the content matter taught at the high school level.
- PHYS 361: Fundamentals of Electronics, PHYS 391: Dynamics and PHYS 411: Thermodynamics have been dropped from the track. These were removed from the curriculum as they are not as useful for high school teachers: for example, the Physics 411 is an upper level course that applies the principles of thermodynamics to engineering problems and is generally taken by students who plan to pursue a physics and engineering careers.

B. Program *coherence* refers to 1) appropriate sequencing of courses, not a mere bundling of credits, so that 2) student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Describe any impacts to coherence that the proposed revision to the program may have.

These revisions make each track more coherent. With these changes, all students will receive a more robust education in physics that puts them in an excellent position to enter industry or a graduate program.

C. Have the admission requirements changed? If so, how?

No

D. If a similar program at MSU or in Kentucky exists, provide justification for the duplication.

The current revision does not change the essence of the existing program or introduce duplication issues.

III. PURPOSE, GOALS, AND OBJECTIVES

A. What are the goals and objectives of this proposal? How do the proposed changes impact the program's alignment with the program's mission and goals, and/or the University's mission and goals?

There are no changes in specific goals and measurable objectives and how they relate to the MSU mission statement.

The MSU mission is that as a community of lifelong learners, we will:

- Educate students for success in a global environment;
- Engage in scholarship;
- Promote diversity of people and ideas;
- Foster innovation, collaboration and creative thinking; and
- Serve our communities to improve the quality of life.

The student enrolled in the Physics Areas will:

1. Have an understanding of the core concepts of physics.
2. Develop analytical skills and learning techniques to enable learning new areas of physics.
3. Read and understand technical literature and present oral reports.
4. Be able to function in a laboratory setting to both analyze data and write reports.
5. Be able to apply basic principles of physics in a problem solving situation such as carrying out a technical project.

B. State the revised program outcomes or competencies to be achieved by students.

The current Physics Area outcomes and competencies will remain unchanged. The current Program Competencies are listed below:

1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e., be able to self-educate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.

7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.
8. Be able to use the basic principles of physics as presented in the first-year class in a wide variety of contexts, especially the relationship force to motion. Be able to relate scientific principles to observed behavior.
9. Comprehend the major concepts of Newtonian analysis of motion, energy and momentum conservation, rotational motion, electric and magnetic fields and optics, including interference.

C. How do the specific goals and objectives relate to the mission statement of the University?

The overall goal and objective of the Physics Area is directly related to the University's goals and objectives of offering excellent undergraduate programs to facilitate their career aspirations as well as recruiting and retaining excellent students in physics.

D. List the methods of program assessment to be used other than course grades to ensure that the desired outcomes or competencies are attained by students. Indicate the frequency of assessment and how results will be made available to program faculty.

The following will be used to evaluate competency:
1: Force Concept Inventory
Students will be evaluated through the Force Concept Inventory Pre-test/Post-test evaluation of "Peer Instruction: A user's Manual", by Eric Mazur, Prentice Hall, 1997. This test will be administered on the second day of class as a pre-test, and at week 10 as a post-test.

2: Capstone Presentation
Students will take a capstone course that involves problem solving through the application of the basic principles of physics, and make a presentation of their results at the conclusion of the semester.

3: Research Project Knowledge Scores
Each student in the Physics capstone will conduct a research project and give a research project presentation that will be graded by a committee of 2 faculty members. Each semester, the instructor of the Physics capstone course for that semester will compute the average of the scores on the knowledge-based portion of the research project presentation for those students who completed the course with a grade of "C" or better.

4: Research Presentation Communication Scores
Each student in the Physics capstone will conduct a research project and give a research project presentation that will be graded by a committee of 2 faculty members. Each semester, the instructor of the Physics capstone course for that semester will compute the average of the scores on the communication-based portion of the research project presentation for those students who completed the course with a grade of "C" or better.

5: Research Paper Scores
Each student in the Physics capstone will conduct a research project and write a research paper that will be graded by a committee of 2 faculty members. Each semester, the instructor of the Physics capstone course for that semester will compute the average of the scores on the research paper for those students who completed the course with a grade of "C" or better.

Results will be reported annually at faculty meetings.

E. List discipline-specific standards for accreditation in addition to Southern Association of Colleges and Schools (SACS) accreditation standards. If applicable, attach current statement of requirements.

There are no discipline-specific accreditation standards.

IV. IMPACT

A. How will the program changes affect transfer students?

Transfer students should not be affected. In addition, degree pathway were developed in the fall 2018 and will be updated to make transfering to Morehead State smoother for all Kentucky community colleges

B. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. offers required courses for this program**
- **b. offers elective courses for this program**
- **c. offers similar courses in their program**
- **d. has an equated course**
- **e. has courses in this proposal listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources.**

Dept. of Mathematics
Dept. of Computer Science and Electronics
Dept. of Engineering and Technology Management

No programs will be impacted.

C. Explain the potential impact on the other departments and programs.

No significant impact. Increases/decreases in enrollment due to changes in course requirements.

D. List the individuals in the other departments and programs notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Ahmad Zargari, Associate Dean, School of Engineering and Computer Science (email)
Dr. Christopher Schroeder, Chair, Dept. of Mathematics (email)

E. Does this program revision require new technology? Please note that Information Technology (GH 110) should be notified when the program proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** ☒ **No** **(If yes, a representative from Information Technology must sign the signature sheet.)**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server based license for the software. (IT does not install individual packages in labs, only server based versions).**

2. **the type of hardware to be utilized.**

V. PERSONNEL

A. List name(s), qualifications including highest earned degree, and academic rank(s) of departmental faculty who will teach courses in this program.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Dirk Grupe	Ph.D.	Assistant Professor, Astrophysics and Space Science
Thomas G. Pannuti	Ph.D.	Professor of Space Science and Astrophysics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external or adjunct faculty, if appropriate.

N/A

C. List any additional support personnel (clerical, laboratory assistants, and technicians) needed for implementation.

No additional support personnel will be required.

D. List additional faculty including academic rank and qualifications, who must be employed during the next four years if this is implemented.

No additional faculty will be required.

VI. ADDITIONAL INFORMATION

A. Identify the enrollment and number of graduates from this program for the past four years

Previous Four Years	Enrollment,	Graduation
2015-16:	51	5
2016-17:	57	12
2017-18:	51	11
2018-19:	62	11

B. List anticipated enrollment and number of graduates from this program for the next four years.

Next Four Years	Enrollment,	Graduation
2019-20:	62	11
2020-21:	62	11

2021-22:	64	12
2022-23:	66	12

C. Explain any additional or remodeled facilities that will be required.

No remodeling of existing facilities nor additional facilities will be required.

D. List any additional equipment required.

No additional equipment will be required.

E. Provide the estimated additional cost required to support this program for the next four years. Identify source of new funds (special legislative request, system reallocation, etc.).

No additional funding is expected to be required.

VII. PROPOSED PROGRAM REQUIREMENTS

Please use the following template to list all Program courses. To create additional lines, tab while cursor is in the last "Course Hours" field.

Example of different types of entries. Not all programs, minors or certificates will have each type of entry.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MSU	300	Name of course	3
MSU	400	Name of variable hour course	1-3
Variable		Free Electives	9

General Education

If the Program requires specific general education courses list them here. These courses should NOT have hours listed again in the Program requirements. (e.g. exchange courses, capstone, etc.) Remaining hours should be listed with "variable" as course prefix and "General Education" as course name with the total remaining general education hours in course hours.

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
MATH	175	Calculus I	4
PHYS	499C	Capstone and Senior Thesis I	2
PHYS	499D	Capstone and Senior Thesis II	1
Variable		General Education	30

Total General Education Hours	37

Program Core Hours

Program Core courses must be taken by all students in the program. This section cannot contain options such as "MSU 111 or MSU 112" or "choose 3 hours from the following list". Any core Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
CHEM	111	Principles of Chemistry I	4

CHEM	112	Principles of Chemistry II	4
MATH	275	Calculus II	4
MATH	276	Calculus III	4
MATH	363	Differential Equations	3
PHYS	105	Introduction to Physics & Engineering Professions	1
PHYS	181	Introduction to Scientific Computing	3
PHYS	231	Engineering Physics I	5
PHYS	231L	Engineering Physics I Lab	0
PHYS	232	Engineering Physics II	5
PHYS	232L	Engineering Physics II Lab	0
PHYS	340	Experimental Physics	3
PHYS	353	Concepts of Modern Physics I	4
PHYS	354	Concepts of Modern Physics II	3
PHYS	381	Computer Solutions to Engineering and Science Problems	3
PHYS	481	Mathematics for Scientists and Engineers	3

Total Program Core Hours (This total should be at least 50% or more of the Total Program Hours; not including general education hours and free elective hours).	49

Other Program Required Hours

Other Program Required Hours are required program courses with the option of choosing between two specific courses (i.e. "MSU 111 or MSU 112"). Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours

Total Other Program Required Hours	

Program Electives

Program Electives are a list of required program-related courses from which a student chooses a specific number of hours. (e.g. "choose 3 hours from the following list"). Track electives should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours

Total Program Elective Hours	

IF YOUR PROGRAM DOES NOT HAVE TRACKS, PLEASE PROCEED TO THE FREE ELECTIVE SECTION BELOW.

***Please note: If you need more than two tracks, please contact *undergraduate@moreheadstate.edu* so that the forms can be revised to fit your needs.**

Program Track Name: Astrophysics			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
ASTR	125	Astronomical and Physics Methods to Explore the Universe	0
ASTR	130	Stars, Galaxies and Cosmology	3
ASTR	311	Astrophysics I: Stars and Stellar Evolution	3
ASTR	312	Astrophysics II: Galaxies and Cosmology	3
ASTR	324	Radio Astronomy	3
ASTR	431	Space Plasma Physics	3
ASTR	460	High Energy Astrophysics	3
ESS	303	Planetary Geology	3
PHYS	332	Electricity and Magnetism	4
PHYS	391	Dynamics	3
PHYS	493	Quantum Mechanics	3
		Choose three hours from the following technical electives:	3
ASTR	299	Special Topics in Astronomy	
ASTR	403	Astrophysical Instrumentation and Payloads	
MATH	365	Introduction to Mathematical Statistics	
PHYS	412	Light and Physical Optics	
SSE	299	Selected Topics in Space Science and Engineering	
SSE	399	Selected Topics	
SSE	476	Directed Research	

Total Track Hours	34

Program Track Name: Computational Physics			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
CS	170	Introduction to Computer Science	4
CIS	205	Introduction to Programming – C++	3
CS	303	Data Structures	3
MATH	301	Elementary Linear Algebra	3

CS	310	Algorithms and Advanced Data Structures	3
PHYS	332	Electricity and Magnetism	4
PHYS	391	Dynamics	3
CS	420	Data Mining Concepts	3
PHYS	493	Quantum Mechanics	3

Total Track Hours	29

Program Track Name: Engineering Physics Electrical

Please list all Track Requirements

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
EEC	241	Circuit Analysis	3
EEC	242	Principles of Electronic Communications	3
EEC	342	Electronic Devices and Circuits	3
EMM	203	Computer Aided Design I	3
MATH	353	Introduction to Statistics	3
PHYS	211	Circuits	3
PHYS	332	Electricity and Magnetism	4
PHYS	361	Fundamentals of Electronics	3
PHYS	411	Thermodynamics	3
PHYS	412	Light and Physical Optics	3

Total Track Hours	31

Program Track Name: Engineering Physics Mechanical

Please list all Track Requirements

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
EMM	186	Manufacturing Processes I	3
EMM	203	Computer Aided Design I	3
EMM	303	Mechanics of Material	3
ETM	260	Thermal and Fluid Systems	3
MATH	353	Introduction to Statistics	3
PHYS	221	Statics	3
PHYS	361	Fundamentals of Electronics	3
PHYS	391	Dynamics	3
PHYS	411	Thermodynamics	3

Total Track Hours	27

Program Track Name: MSUTeach (Physics)

Please list all Track Requirements

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
PHYS	350	Nuclear Science	4
PHYS	412	Light and Physical Optics	3
UTCH	100	Step 1: Inquiry Approaches to Teaching	1
UTCH	150	Step 2: Inquiry-Based Lesson Design	1
UTCH	200	Knowing and Learning in Mathematics and Science	3
UTCH	250	Perspectives on Science and Mathematics	3
UTCH	300	Classroom Interactions	3
UTCH	315	Functions and Modeling	3
UTCH	350	Project-Based Instruction	3
UTCH	400	Research Methods	3
UTCH	450	Apprentice Teaching	12

Total Track Hours	39

Free Electives:

Free General Electives are any course hours still necessary to meet the 120 hour degree requirement after all program requirements are met.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
Variable		Free Electives	0 - 7

Total Free Elective Hours	0 - 7

TOTAL DEGREE HOURS (Total degree hours should equal 120 or contain a rationale as to why it cannot).	120 - 125

Rationale as to why program exceeds 120 hours (if applicable):

Physics Area (MSUTeach Track) is the only track that exceeds 120 hours. This is a consequence of the requirements for secondary education certification requirements.

If there is a change to the current catalog language for program competencies, admission criteria, standardized testing requirements, etc., please list the NEW catalog language below. Do not list the old catalog language. Do not list the program courses again.

Curriculum Map – Physics Area (Astrophysics Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I
HUM II
SBS I
SBS II
NSC I
NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	FYS 101 First Year Seminar	G	3		ENG 100 - Writing I	G	3
	CHEM 111/111L Principles of Chemistry I & Lab	R	4		CHEM 112/112L Principles of Chemistry II & Lab	R	4
	NSC 2 ASTR 125 (Exchange)	G	3		PHYS 181 Introduction to Scientific Computing	R	3
	PHYS 105 Introduction to Physics & Engineering Professions	R	3		ASTR 130 Stars, Galaxies, and Cosmology	R	3
	MATH 175 Calculus I	G/R	4		COMS 108 Fundamentals of Speech Comm.	G	3
	Total Credit Hours		15		**Total Credit Hours**		16

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	MATH 275 Calculus II	R	4		MATH 276 Calculus III	R	4
	PHYS 231/231L Engineering Physics I & Lab	R	5		PHYS 232/232L Engineering Physics II & Lab	R	5
	ESS 303 Planetary Geology	R/U	3		HUM 1 Humanities - Elective	G	3
	SBS 1 Social/Behavioral Sciences - Elective	G	3		ENG 200 Writing II	G	3
	Total Credit Hours		15		**Total Credit Hours**		15

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	ASTR 311 Astrophysics I	R/U	3		ASTR 312 Astrophysics II	R/U	3
	PHYS 353 Concepts of Modern Physics I	R/U	4		MATH 363 Differential Equations	R/U	3
	Technical Elective	R/U	3		NSC I – Natural Sciences - Elective	G	3
	PHYS 481 Math for Eng. And Sci.	R/U	3		ASTR 324 Radio Astronomy	R/U	3
	SBS 2 Social/Behavioral Sciences - Elective	G	3		PHYS 354 Concepts of Modern Physics II	R/U	3
	Total Credit Hours		16		**Total Credit Hours**		15

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 391 Dynamics	R/U	3		PHYS 332 Electricity and Magnetism	R/U	4
	PHYS 381 Comp. Solns. to Engineering and Science Prob.	R/U	3		ASTR 460 High Energy Astrophysics	R/U	3
	ASTR 499C Senior Thesis I	G/U	2		ASTR 499D Senior Thesis II	G/U	1
	PHYS 340 Experimental Physics	R/U	3		ASTR 431 Space Plasma Physics	R/U	3
	HUM 2 Humanities - Elective	G	3		PHYS 493 Quantum Mechanics	R/U	3
	Total Credit Hours		14		**Total Credit Hours**		14

(E) Elective
(G) General Education Course
(P) Pre-requisite
(R) Required Course
(U) Upper Division Course 300-400 level (you must have 42 hours)

Curriculum Map – Physics Area (Computational Physics Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I	SBS I	NSC I
HUM II	SBS II	NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	CHEM 111/111L Principles of Chemistry I & Lab	R	4		CHEM 112/112L Principles of Chemistry II & Lab	R	4
	MATH 175 Calculus I	G/R	4		ENG 100 Writing I	G	3
	MATH 170 Introduction to Computer Science	R	4		COMS 108 Fundamentals of Speech	G	3
	PHYS 105 Introduction to Physics & Engineering Professions	R	1		PHYS 181 Introduction to Scientific Computing	R	3
	FYS 101 First Year Seminar	G	3		MATH 275 Calculus II	R	4
	Total Credit Hours		16		**Total Credit Hours**		17

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	MATH 276 Calculus III	R	4		MATH 363 Differential Equations	R/U	3
	PHYS 231/231L Engineering Physics I & Lab	R	5		PHYS 232/232L Engineering Physics II & Lab	R	5
	ENG 200 Writing II	G	3		MATH 301 Elementary Linear Algebra	R/U	3
	NSC I Natural Sciences - Elective	G	3		CIS 205 Intro to Programming – C++	R	3
	Total Credit Hours		15		**Total Credit Hours**		14

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 353 Concepts of Modern Physics I	R/U	4		PHYS 354 Concepts of Modern Physics II	R/U	3
	PHYS 340 Experimental Physics	R/U	3		CS 310 Algorithms & Adv. Data. Str.	R/U	3
	SBS I Social/Behavioral Sciences - Elective	G	3		PHYS 332 Electricity and Magnetism	R/U	4
	PHYS 481 Mathematics for Scientists & Engineers	R/U	3		PHYS 381 Computer Solutions to Engineering and Science Problems	R/U	3
	CS 303 Data Structures	R/U	3		HUM I Humanities - Elective	G	3
	Total Credit Hours		16		**Total Credit Hours**		16

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 391 Dynamics	R/U	3		PHYS 499D Capstone & Senior Thesis II	G/U	1
	PHYS 499C Capstone & Senior Thesis I	G/U	2		PHYS 493 Quantum Mechanics	R/U	3
	SBS II Social/Behavioral Sciences - Elective	G	3		CS 420 Data Mining Concepts	R/U	3
	NSC II Natural Sciences - Elective	G	3		HUM II Humanities - Elective	G	3
	Free Elective	E/U	2		Free Elective	E/U	3
	Total Credit Hours		13		**Total Credit Hours**		13

(E) Elective (G) General Education Course
(P) Pre-requisite (R) Required Course
(U) Upper Division Course 300-400 level (you must have 42 hours)

Curriculum Map – Physics Area (Engineering Physics (Electrical) Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I	SBS I	NSC I
HUM II	SBS II	NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	CHEM 111/111L Principles of Chemistry I & Lab	R	4		CHEM 112/112L Principles of Chemistry II & Lab	R	4
	MATH 175 Calculus I	G/R	4		ENG 100 Writing I	G	3
	EEC 241 Circuit Analysis	R	3		EEC 242 Principles of Electronic Communications	R	3
	PHYS 105 Introduction to Physics & Engineering Professions	R	1		PHYS 181 Introduction to Scientific Computing	R	3
	FYS 101 First Year Seminar	G	3		MATH 275 Calculus II	R	4
	Total Credit Hours		15		**Total Credit Hours**		17

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	MATH 276 Calculus III	R	4		MATH 363 Differential Equations	R/U	3
	PHYS 231/231L Engineering Physics I & Lab	R	5		PHYS 232/232L Engineering Physics II & Lab	R	5
	ENG 200 Writing II	G	3		COMS 108 Fundamentals of Speech	G	3
	NSC I Natural Sciences - Elective	G	3		EEC 342 Electronic Devices and Circuits	R/U	3
	Total Credit Hours		15		**Total Credit Hours**		14

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 353 Concepts of Modern Physics I	R/U	4		PHYS 354 Concepts of Modern Physics II	R/U	3
	PHYS 340 Experimental Physics	R/U	3		PHYS 361 Fundamentals of Electronics	R/U	3
	SBS I Social/Behavioral Sciences - Elective	G	3		HUM I Humanities - Elective	G	3
	PHYS 481 Mathematics for Scientists & Engineers	R/U	3		PHYS 381 Computer Solutions to Engineering and Science Problems	R/U	3
	PHYS 211 Circuits	R	3		PHYS 411 Thermodynamics	R/U	3
	Total Credit Hours		16		**Total Credit Hours**		15

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 499C Capstone & Senior Thesis I	G/U	2		PHYS 499D Capstone & Senior Thesis II	G/U	1
	SBS II Social/Behavioral Sciences - Elective	G	3		HUM II Humanities - Elective	G	3
	MATH 353 Introduction to Statistics	R/U	3		PHYS 332 Electricity and Magnetism	R/U	4
	NSC II Natural Sciences - Elective	G	3		EMM 203 Computer Aided Design I	R	3
	Free Elective	E/U	3		PHYS 412 Light and Physical Optics	R/U	3
	Total Credit Hours		14		**Total Credit Hours**		14

(E) Elective (G) General Education Course
(P) Pre-requisite (R) Required Course
(U) Upper Division Course 300-400 level (you must have 42 hours)

Curriculum Map – Physics Area (Engineering Physics (Mechanical) Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I
HUM II
SBS I
SBS II
NSC I
NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	CHEM 111/111L Principles of Chemistry I & Lab	R	4		CHEM 112/112L Principles of Chemistry II & Lab	R	4
	MATH 175 Calculus I	G/R	4		ENG 100 Writing I	G	3
	EMM 186 Manufacturing Processes I	R	3		COMS 108 Fundamentals of Speech	G	3
	PHYS 105 Introduction to Physics & Engineering Professions	R	1		PHYS 181 Introduction to Scientific Computing	R	3
	FYS 101 First Year Seminar	G	3		MATH 275 Calculus II	R	4
	Total Credit Hours		15		**Total Credit Hours**		17

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	MATH 276 Calculus III	R	4		MATH 363 Differential Equations	R/U	3
	PHYS 231/231L Engineering Physics I & Lab	R	5		PHYS 232/232L Engineering Physics II & Lab	R	5
	ENG 200 Writing II	G	3		EMM 203 Computer Aided Design I	R	3
	NSC I Natural Sciences - Elective	G	3		ETM 260 Thermal and Fluid Systems	R	3
	Total Credit Hours		15		**Total Credit Hours**		14

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 353 Concepts of Modern Physics I	R/U	4		PHYS 354 Concepts of Modern Physics II	R/U	3
	PHYS 340 Experimental Physics	R/U	3		EMM 303 Mechanics of Material	R/U	3
	SBS I Social/Behavioral Sciences - Elective	G	3		HUM I Humanities - Elective	G	3
	PHYS 481 Mathematics for Scientists & Engineers	R/U	3		PHYS 381 Computer Solutions to Engineering and Science Problems	R/U	3
	MATH 353 Introduction to Statistics	R/U	3		PHYS 221 Statics	R	3
	Total Credit Hours		16		**Total Credit Hours**		15

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 499C Capstone & Senior Thesis I	G/U	2		PHYS 499D Capstone & Senior Thesis II	G/U	1
	SBS II Social/Behavioral Sciences - Elective	G	3		HUM II Humanities - Elective	G	3
	PHYS 391 Dynamics	R/U	3		PHYS 361 Fundamentals of Electronics	R/U	3
	NSC II Natural Sciences - Elective	G	3		PHYS 411 Thermodynamics	R/U	3
	Free Elective	E/U	3		Free Elective	E/U	3
					Free Elective	E/U	1
	Total Credit Hours		14		**Total Credit Hours**		14

(E) Elective
(G) General Education Course
(P) Pre-requisite
(R) Required Course
(U) Upper Division Course 300-400 level (you must have 42 hours)

Curriculum Map – Physics Area (MSUTeach Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I	SBS I	NSC I
HUM II	SBS II	NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 105 Introduction to Physics & Engineering Professions	R	1		PHYS 181 Introduction to Scientific Computing	R	3
	CHEM 111/111L Principles of Chemistry I & Lab	R	4		CHEM 112/112L Principles of Chemistry II & Lab	R	4
	UTCH 100 Step I	R	1		UTCH 150 Step 2	R	1
	ENG 100 Writing I	G	3		ENG 200 Writing II	G	3
	MATH 175 Calculus I	G	4		MATH 275 Calculus II	R	4
	FYS 101 First Year Seminar	G	3		COMS 108 Fundamentals of Speech	G	3
	Total Credit Hours		16		**Total Credit Hours**		18

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	MATH 276 Calculus III	R	4		MATH 363 Differential Equations	R/U	3
	PHYS 231/231L Engineering Physics I & Lab	R	5		PHYS 232/232L Engineering Physics II & Lab	R	5
	HUM I Humanities - Elective	G	3		SBS I Social/Behavioral Sciences - Elective	G	3
	NSC I Natural Sciences - Elective	G	3		NSC II ASTR 112 Intro to Astronomy	G	3
	UTCH 200 Knowing and Learning in Mathematics and Science	R	3		UTCH 250 Perspectives on Science and Mathematics	R	3
	Total Credit Hours		18		**Total Credit Hours**		17

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 353 Concepts of Modern Physics I	R/U	4		PHYS 354 Concepts of Modern Physics II	R/U	3
	PHYS 340 Experimental Physics	R/U	3		PHYS 412 Light and Physical Optics	R/U	3
	SBS II Social/Behavioral Sciences - Elective	G	3		PHYS 499C Senior Thesis I	G/U	2
	HUM II Humanities - Elective	G	3		UTCH 315 Functions and Modeling	R/U	3
	UTCH 300 Classroom Interactions	R/U	3		PHYS 350 Nuclear Science	R/U	4
	Total Credit Hours		16		**Total Credit Hours**		15

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 381 Computer Solutions	R/U	3		UTCH 450 Apprentice Teaching	R/U	12
	UTCH 400 Research Methods	R/U	3				
	UTCH 350 Project Based Instruction	R/U	3				
	PHYS 481 Mathematics for Scientists & Engineers	R/U	3				
	PHYS 499D Senior Thesis II	G/U	1				
	Total Credit Hours		13		**Total Credit Hours**		12

(E) Elective (G) General Education Course
(P) Pre-requisite (R) Required Course
(U) Upper Division Course 300-400 level (you must have 42 hours)

To: Undergraduate Curriculum Committee Members
From: Ignacio Birriel, Professor of Physics
Date: October 28, 2019
Re: Physics Area and Major: Bachelor of Science

Please accept the following documents for program revisions to the Physics Area and Major. Attached are curriculum revision proposals for each of these two programs of study, new course proposals for PHYS 101, PHYS 231L, PHYS 232L, major course proposals for PHYS 231, PHYS 232 and PHYS 181.

Revisions for the Physics Area include:

Changes to the Core:

- PHYS 101: Introduction to Physics & Engineering Professions has been added to the core. This is a new course, attached is a "New Course or Major Revision to Existing Course" proposal.
- PHYS 231A and 232A: Engineering Physics I and II Lab have been revised to PHYS 231L and 232L: Engineering Physics I and II Lab. This is a new course, attached is a "New Course or Major Revision to Existing Course" proposal.
- PHYS 231 and 232: Engineering Physics I and II have been revised to include the Lab as part of the student evaluation. Attached are "New Course or Major Revision to Existing Course" proposals.
- PHYS 270: Introduction to Scientific Computing has been updated to PHYS 181: Introduction to Scientific Computing. The changes to the course reflect the latest trends in the field. Attached is a "New Course or Major Revision to Existing Course" proposal.

Changes to the Astrophysics Track:

- ASTR 498: Senior Research has been removed to accommodate adding PHYS 101 to the core.

Changes to the Computational Physics Track:

- CIS 205: Introduction to Programming – C++ has been added. This course was a hidden prerequisite in the past.
- MATH 301: Elementary Linear Algebra, CS 310: Algorithms and Advanced Data Structures, PHYS 332: Electricity and Magnetism and PHYS 493: Quantum Mechanics have been added to the track. The changes is to create a sounder program based on current trends in the field and feedback from alumni.
- PHYS 411: Thermodynamics and MATH 312: Numerical Methods have been dropped from the track. The change reflect the latest trends in the field.

Changes to Engineering Physics Mechanical Track:

- MATH 353: Introduction to Statistics, EMM 203 Computer Aided Design I, EMM 303 Mechanics of Material and PHYS 361 Fundamentals of Electronics have been added to

the track. The changes are to create a sounder program based on current trends in the field and feedback from alumni.

- ETM 307: Materials Science has been dropped from the track. The change reflects the latest trends in the field.

Changes to Engineering Physics Electrical Track:

- PHYS 211: Circuits, EMM 203 Computer Aided Design I, PHYS 412: Light and Physical Optics and Math 353 Introduction to Statistics have been added to the track. The changes is to create a sounder program based on current trends in the field and feedback from alumni.

Changes to MSUTeach Track:

- PHYS 350: Nuclear Science and PHYS 412: Light and Physical Optics have been added to the track. These courses have been added as they are more consistent with the content matter taught at the high school level.
- PHYS 361: Fundamentals of Electronics, PHYS 391: Dynamics and PHYS 411: Thermodynamics have been dropped from the track. These were removed from the curriculum as they are not as useful for high school teachers: for example, the Physics 411 is an upper level course that applies the principles of thermodynamics to engineering problems and is generally taken by students who plan to pursue a physics and engineering careers.

Revisions for the Physics Major include:

Changes to the Core:

- PHYS 101: Introduction to Physics & Engineering Professions has been added to the core. This is a new course, attached is a "New Course or Major Revision to Existing Course" proposal.
- PHYS 231A and 232A: Engineering Physics I and II Lab have been revised to PHYS 231L and 232L: Engineering Physics I and II Lab. Attached are "Minor Revision to an Existing Course" proposals.
- PHYS 231 and 232: Engineering Physics I and II have been revised to include the Lab as part of the student evaluation. Attached are "New Course or Major Revision to Existing Course" proposals.
- PHYS 270: Introduction to Scientific Computing has been updated to PHYS 181: Introduction to Scientific Computing. The changes to the course reflect the latest trends in the field. Attached is a "Minor Revision to an Existing Course" proposal.
- PHYS 412: Light & Physical Optics has been added to the core.

Changes to the Applied Physics Track:

- PHIL 400:Philosophy of Science has been eliminated. This course is being replaced with UTCH 400: Research Methods as this course is more applied than PHIL 400.

Your consideration of these proposals is greatly appreciated. If you have any questions or concerns, please feel free to contact me at i.birriel@moreheadstate.edu.

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form
Revised January 2019

Program: (as listed in current catalog)	Physics Major - Bachelor of Science
Department: (as listed in current catalog)	Physics, Earth Science, and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

Thomas Pannuti — Thomas Pannuti — 10/28/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Eric Jerde — ERIC JERDE — (X) Approved ( ) Disapproved — 10/28/19

Department Chair or Associate Dean (Sign and Print) — Date

Dirk Grupe — DIRK GRUPE — (X) Approved ( ) Disapproved — 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

Wayne Miller — WAYNE MILLER — (X) Approved ( ) Disapproved — 11/20/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Conch — Laurie Conch — (X) Approved ( ) Disapproved — 12/16/19

Undergraduate Curriculum Committee (Sign and Print) — Date

(X) Approved ( ) Disapproved — 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Physics Major - Bachelor of Science
Department: (as listed in current catalog)	Physics, Earth Science, and Space Systems Engineering
College: (as listed in current catalog)	Science

Helpful Information:

1. Important Definitions Used in the Curriculum Process
   - Area = a program of study comprised of at least 48 hours
   - Major = a program of study comprised of at least 30 hours, accompanied by a minor
   - Minor = a set of discipline-specific courses of at least 21 hours
   - Certificate = a series of courses related to a specific topic or skill with a prescribed number of hours. For additional information contact the Office of Academic Programs at 783-2003 or email undergraduate@moreheadstate.edu.
   - Core = a set of required courses taken by all students in a specific Area or Major
   - Track = a subset of courses within an area or major designed to develop expertise in a particular topic at the undergraduate level
   - Equated courses vs. cross-listed courses = equated courses are courses of identical content that have different prefixes (and are approved through the undergraduate curriculum process), whereas cross-listed courses have the same instructor and are offered at the same time/location.
   - Pre-requisite = course(s) that a student must successfully complete prior to registering for a more advanced course.
   - Co-requisite = course(s) that a student must take concurrently with another course.
2. An Associate's Degree normally requires at least 60 semester hours including 15 hours of prescribed general education credit.
3. A baccalaureate degree program at the undergraduate level is either an Area or a Major.
4. A program's total credit hours include program core (i.e., courses taken by all students in the program), program supplemental courses (other required hours), and program specific electives. No general education courses or free elective courses count toward total program hours.
5. Curriculum should be designed so that the program's total credit hours plus general education hours and free electives add up to 120 total hours, with 42 of the hours in upper division (i.e., 300- to 400-level) courses.
6. To ensure that students enrolled in a program have common experiences fifty percent (50%) of a program's total credit hours must be made up of core courses.
   Examples:
   a. If an Area is designed with 48 hours, then 24 or more of those hours must be in core courses. The rest of the program hours can be other program requirements that vary from student to student.
   b. If a Major is designed with 30 hours, then 15 or more of those hours must be in core courses. The remainder of the major hours can be other program supplemental courses and program specific electives that vary from student to student. The minor is not considered in calculations for this 50% rule.
   c. If a Major has 30 hours and includes tracks, the core must contain at least the same number (or

higher) of hours as the track. For example, a Major could have 15 hours in core, 9 hours in the track, and 6 hours as program electives.

7. Any proposal with a secondary education component must be routed through the Teacher Education Council.

8. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	If an Information Technology signature is required, it has been obtained.	☒
☒	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The title, department, and college names correspond to the current catalog.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☒
☒	Responses are complete and applicable for each question.	☒
☒	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☒
☒	Each course has been reviewed for pre-requisites, co-requisites or testing requirements. There are no hidden pre-requisites, co-requisites, or testing requirements.	☒
☒	The program core contains at least 50% of the total program hours (not including general education and free elective hours)	☒
☒	The program core does not contain courses that should be listed in other sections of the proposal (i.e. Other Program Required Hours, Program Electives, etc.).	☒
☒	The program has an adequate number of area/major hours (minimum of 48 for area and minimum 30 for major).	☒
☒	The program has at least 42 upper division hours.	☒
☒	If the program is a major, hours are designated for an accompanying minor.	☒
	If the program has tracks, the total track hours do not exceed the total core hours.	
☒	The program has a maximum of 120 hours. If not, sufficient rationale is included in the proposal.	☒
☒	The curriculum maps each start on a separate page.	☒
☒	The curriculum map contains the official name of the program and track (if applicable).	☒
☒	The curriculum map contains accurate course prefix, number, and name for each course.	☒
☒	The curriculum map lists General Education courses in the first two years.	☒

☑	If the program has tracks, a separate curriculum map is included for each track.	☑
☑	The curriculum map contains EXACTLY the same courses and the same number of credit-hours as the proposal.	☑
☑	The curriculum map does not contain hidden pre-requisites or co-requisites.	☑
☑	The curriculum map codes are accurate.	☑
☑	If the program has tracks, a separate curriculum map is included for each track.	☑
☑	The total credit hours for each semester are acceptable (full-time, not overload, etc.).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Ignacio Birriel — 10/28/19
Approval Date

Department Curriculum Committee Chair (Sign and Print) — Thomas Pannuti — 10/28/19
Approval Date

PROGRAM
Major Revision of Existing Program

The outline below is to be used for program revisions. Each revised or new course included in this program requires a separate "New Course or Major Revision to Existing Course" proposal. *Note: an amended curriculum map must be attached to each "Major Revision of Existing Program" proposal.*

I. EXISTING PROGRAM REVISION

State the current title of the Program (as listed in the current catalog)

Physics Major - Bachelor of Science

List the degree (e.g. Bachelor of Science) and major or area (e.g. Math Major, Biology Area); as listed in the current catalog. Include tracks if applicable (e.g. Bachelor of Arts, Philosophy Major, Religious Studies Track).

Physics Major (Professional Physics Track) - Bachelor of Science
Physics Major (Applied Physics Track) - Bachelor of Science

State the proposed revised title of the Program (if applicable)

N/A

If the degree (e.g. Bachelor of Science) and/or major or area (e.g. Math Major, Biology Area) names are changing, please list them below. Include tracks if applicable.

N/A

CIP Code - ***Contact your department chair to verify the correct CIP Code information.***

40.0801

II. NEED AND JUSTIFICATON

A. Describe the changes and justify what this proposal is requesting; what are you doing and why are you doing it?

Revisions for the Physics Major include:
Changes to the Core:

- PHYS 105: Introduction to Physics & Engineering Professions has been added to the core. This is a new course, attached is a "New Course or Major Revision to Existing Course" proposal.
- PHYS 231A and 232A: Engineering Physics I and II Lab have been revised to PHYS 231L and 232L: Engineering Physics I and II Lab. This is a new course, attached is a "New Course or Major Revision to Existing Course" proposal.
- PHYS 231 and 232: Engineering Physics I and II have been revised to include the Lab as part of the student evaluation. Attached are "New Course or Major Revision to Existing Course" proposals.
- PHYS 270: Introduction to Scientific Computing has been updated to PHYS 181: Introduction to Scientific Computing. The changes to the course reflect the latest trends in the field. Attached is a "New Course or Major Revision to Existing Course" proposal.
- PHYS 412: Light & Physical Optics has been added to the core.

Changes to the Applied Physics Track:

- PHIL 400:Philosophy of Science has been eliminated. This course is being replaced with UTCH 400: Research Methods as this course is more applied than PHIL 400.

B. Program *coherence* refers to 1) appropriate sequencing of courses, not a mere bundling of credits, so that 2) student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Describe any impacts to coherence that the proposed revision to the program may have.

These revisions make each track more coherent. With these changes, all students will receive a more robust education in physics that puts them in an excellent position to enter industry or a graduate program.

C. Have the admission requirements changed? If so, how?

No.

D. If a similar program at MSU or in Kentucky exists, provide justification for the duplication.

The current revision does not change the essence of the existing program or introduce duplication issues.

III. PURPOSE, GOALS, AND OBJECTIVES

A. What are the goals and objectives of this proposal? How do the proposed changes impact the program's alignment with the program's mission and goals, and/or the University's mission and goals?

There are no changes in specific goals and measurable objectives and how they relate to the MSU mission statement.

The MSU mission is that as a community of lifelong learners, we will:

- Educate students for success in a global environment;
- Engage in scholarship;
- Promote diversity of people and ideas;
- Foster innovation, collaboration and creative thinking; and
- Serve our communities to improve the quality of life.

The student enrolled in the Physics Majors will:

1. Have an understanding of the core concepts of physics.
2. Develop analytical skills and learning techniques to enable learning new areas of physics.
3. Read and understand technical literature and present oral reports.
4. Be able to function in a laboratory setting to both analyze data and write reports.
5. Be able to apply basic principles of physics in a problem solving situation such as carrying out a technical project.

B. State the revised program outcomes or competencies to be achieved by students.

The current Physics Major outcomes and competencies will remain unchanged. The current Program Competencies are listed below:

1. Develop enough learning techniques to adapt to new vocational and educational situations, i.e., be able to self-educate in new applied areas and keep up with progress in the field.
2. Develop enough self-confidence, personal independence and understanding of scientific methods to carry out a technical project on one's own with only consultant-style help.
3. Read technical literature with good comprehension.
4. Write technical reports in a clear and logical way.
5. Present oral reports on technical material in a clear and logical way.
6. Be able to retrieve any needed information from the scientific literature.
7. Analyze laboratory data for its correctness and locate probable sources of error, including an understanding of standard statistical tests and the concepts of error and uncertainty, and an understanding of the advantages and limitations of current instrumental and other laboratory techniques.
8. Be able to use the basic principles of physics as presented in the first-year class in a wide variety of contexts, especially the relationship force to motion. Be able to relate scientific principles to observed behavior.
9. Comprehend the major concepts of Newtonian analysis of motion, energy and momentum conservation, rotational motion, electric and magnetic fields and optics, including interference.

C. How do the specific goals and objectives relate to the mission statement of the University?

The overall goal and objective of the Physics Major is directly related to the University's goals and objectives of offering excellent undergraduate programs to facilitate their career aspirations as well as recruiting and retaining excellent students in physics.

D. List the methods of program assessment to be used other than course grades to ensure that the desired outcomes or competencies are attained by students. Indicate the frequency of assessment and how results will be made available to program faculty.

The following will be used to evaluate competency:

1: Force Concept Inventory

Students will be evaluated through the Force Concept Inventory Pre-test/Post-test evaluation of "Peer Instruction: A user's Manual", by Eric Mazur, Prentice Hall, 1997. This test will be administered on the second day of class as a pre-test, and at week 10 as a post-test.

2: Capstone Presentation

Students will take a capstone course that involves problem solving through the application of the basic principles of physics, and make a presentation of their results at the conclusion of the semester.

3: Research Project Knowledge Scores

Each student in the Physics capstone will conduct a research project and give a research project presentation that will be graded by a committee of 2 faculty members. Each semester, the instructor of the Physics capstone course for that semester will compute the average of the scores on the knowledge-based portion of the research project presentation for those students who completed the course with a grade of “C” or better.

4: Research Presentation Communication Scores

Each student in the Physics capstone will conduct a research project and give a research project presentation that will be graded by a committee of 2 faculty members. Each semester, the instructor of the Physics capstone course for that semester will compute the average of the scores on the communication-based portion of the research project presentation for those students who completed the course with a grade of “C” or better.

5: Research Paper Scores

Each student in the Physics capstone will conduct a research project and write a research paper that will be graded by a committee of 2 faculty members. Each semester, the instructor of the Physics capstone course for that semester will compute the average of the scores on the research paper for those students who completed the course with a grade of “C” or better.

Results will be reported annually at faculty meetings.

E. List discipline-specific standards for accreditation in addition to Southern Association of Colleges and Schools (SACS) accreditation standards. If applicable, attach current statement of requirements.

There are no discipline-specific accreditation standards.

IV. IMPACT

A. How will the program changes affect transfer students?

Transfer students should not be affected. In addition, degree pathway were developed in the fall 2018 and will be updated to make transfering to Morehead State smoother for all Kentucky community colleges.

B. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. offers required courses for this program**
- **b. offers elective courses for this program**
- **c. offers similar courses in their program**
- **d. has an equated course**
- **e. has courses in this proposal listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources.**

Dept. of History, Philosophy, Politics, Global Studies and Legal Studies - Philosophy
MSU Teach

C. Explain the potential impact on the other departments and programs.

No significant impact. Increases/decreases in enrollment due to changes in course requirements.

D. List the individuals in the other departments and programs notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Mike Dobranski, Dept. of Mathamatics (personal conversation)
Dr. Ernst forwarded the information to the Associate Dean (Dr. Murphy) and the Philosophy faculty (Drs. Conroy and Davidson)

E. Does this program revision require new technology? Please note that Information Technology (GH 110) should be notified when the program proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** ☒ **No** **(If yes, a representative from Information Technology must sign the signature sheet.)**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server based license for the software. (IT does not install individual packages in labs, only server based versions).**

2. **the type of hardware to be utilized.**

V. PERSONNEL

A. List name(s), qualifications including highest earned degree, and academic rank(s) of departmental faculty who will teach courses in this program.

James Adkins	Ph.D.	Assistant Professor of Physics
Ignacio Birriel	Ph.D.	Professor of Physics
Jennifer Birriel	Ph.D.	Professor of Physics
Kent Price	Ph.D.	Associate Professor of Physics
Joshua Qualls	Ph.D.	Assistant Professor of Physics and Mathematics

B. Identify external or adjunct faculty, if appropriate.

N/A

C. List any additional support personnel (clerical, laboratory assistants, and technicians) needed for implementation.

No additional support personnel will be required.

D. List additional faculty including academic rank and qualifications, who must be employed during the next four years if this is implemented.

No additional faculty will be required.

VI. ADDITIONAL INFORMATION

A. Identify the enrollment and number of graduates from this program for the past four years

Previous Four Years	Enrollment,	Graduation
2015-16:	27	3
2016-17:	27	4
2017-18:	23	8
2018-19:	24	9

B. List anticipated enrollment and number of graduates from this program for the next four years.

Next Four Years	Enrollment,	Graduation
2019-20:	24	6
2020-21:	25	6
2021-22:	25	6
2022-23:	26	6

C. Explain any additional or remodeled facilities that will be required.

No remodeling of existing facilities nor additional facilities will be required.

D. List any additional equipment required.

No additional equipment will be required.

E. Provide the estimated additional cost required to support this program for the next four years. Identify source of new funds (special legislative request, system reallocation, etc.).

No additional funding is expected to be required..

VII. PROPOSED PROGRAM REQUIREMENTS

Please use the following template to list all Program courses. To create additional lines, tab while cursor is in the last "Course Hours" field.

Example of different types of entries. Not all programs, minors or certificates will have each type of entry.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MSU	300	Name of course	3
MSU	400	Name of variable hour course	1-3
Variable		Free Electives	9

General Education

If the Program requires specific general education courses list them here. These courses should NOT have hours listed again in the Program requirements. (e.g. exchange courses, capstone, etc.) Remaining hours should be listed with "variable" as course prefix and "General Education" as course name with the total remaining general education hours in course hours.

Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
MATH	175	Calculus I	4
PHYS	499C	Capstone and Senior Thesis I	2
PHYS	499D	Capstone and Senior Thesis II	1
Variable		General Education	30

Total General Education Hours	37

Program Core Hours

Program Core courses must be taken by all students in the program. This section cannot contain options such as "MSU 111 or MSU 112" or "choose 3 hours from the following list". Any core Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
CHEM	111	Principles of Chemistry I	4
CHEM	112	Principles of Chemistry II	4
PHYS	105	Introduction to Physics & Engineering Professions	1
PHYS	181	Introduction to Scientific Computing	3
PHYS	231	Engineering Physics I	5
PHYS	231L	Engineering Physics I Lab	0
PHYS	232	Engineering Physics II	5
PHYS	232L	Engineering Physics II Lab	0
PHYS	340	Experimental Physics	3
PHYS	353	Concepts of Modern Physics I	4
PHYS	354	Concepts of Modern Physics II	3
PHYS	361	Fundamentals of Electronics	3
PHYS	412	Light & Physical Optics	3

Total Program Core Hours (This total should be at least 50% or more of the Total Program Hours; not including general education hours and free elective hours).	38

Other Program Required Hours

Other Program Required Hours are required program courses with the option of choosing between two specific courses (i.e. "MSU 111 or MSU 112"). Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MATH	275	Calculus II	4
MATH	276	Calculus III	4
MATH	363	Differential Equations	3

Total Other Program Required Hours	11

Program Electives

Program Electives are a list of required program-related courses from which a student chooses a specific number of hours. (e.g. "choose 3 hours from the following list"). Track electives should be listed in the Track section.

Course Prefix (Example:	Number (Example: 100)	Course Name	Course Hours

ENG)			

Total Program Elective Hours	

IF YOUR PROGRAM DOES NOT HAVE TRACKS, PLEASE PROCEED TO THE FREE ELECTIVE SECTION BELOW.

***Please note: If you need more than two tracks, please contact *undergraduate@moreheadstate.edu* so that the forms can be revised to fit your needs.**

Program Track Name: Applied Physics			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
PHYS	350	Nuclear Science	4
PHYS	411	Thermodynamics	3
UTCH	400	Research Methods	3

Total Track Hours	10

Program Track Name: Professional Physics			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
PHYS	332	Electricity and Magnetism	4
PHYS	391	Dynamics	3
PHYS	493	Quantum Mechanics	3

Total Track Hours	10

Free Electives:			
Free General Electives are any course hours still necessary to meet the 120 hour degree requirement after all program requirements are met.			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**
Variable		Free Elective	3

Total Free Elective Hours	3

TOTAL DEGREE HOURS (Total degree hours should equal 120 or contain a rationale as to why it cannot).	120
Rationale as to why program exceeds 120 hours (if applicable):	
If there is a change to the current catalog language for program competencies, admission criteria, standardized testing requirements, etc., please list the NEW catalog language below. Do not list the old catalog language. Do not list the program courses again.	

Curriculum Map – Physics Major (Applied Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I
HUM II
SBS I
SBS II
NSC I
NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	CHEM 111/111L Principles of Chemistry I & Lab	R	4		CHEM 112/112L Principles of Chemistry II & Lab	R	4
	ENG 100 Writing I	G	3		MATH 175 Calculus I	G/R	4
	PHYS 105 Introduction to Physics & Engineering Professions	R	1		PHYS 181 Introduction to Scientific Computing	R	3
	COMS 108 Fundamentals of Speech	G	3		ENG 200 Writing II	G	3
	FYS 101 First Year Seminar	G	3		SBS I Social/Behavioral Sciences - Elective	G	3
	Total Credit Hours		14		**Total Credit Hours**		17

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 231/231L Engineering Physics I & Lab	R	5		PHYS 232/232L Engineering Physics II & Lab	R	5
	MATH 275 Calculus II	R	4		MATH 276 Calculus III	R	4
	HUM I Humanities - Elective	G	3		HUM II Humanities - Elective	G	3
	NSC I Natural Sciences - Elective	G	3		NSC II Natural Sciences - Elective	G	3
	Total Credit Hours		15		**Total Credit Hours**		15

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 353 Concepts of Modern Physics I	R/U	4		PHYS 354 Concepts of Modern Physics II	R/U	3
	PHYS 340 Experimental Physics	R/U	3		PHYS 361 Fundamentals of Electronics	R/U	3
	MATH 363 Differential Equations	R/U	3		PHYS 350 Nuclear Science	R/U	4
	Minor Elective	R	3		Minor Elective	R	3
	Minor Elective	R	3		Minor Elective	R/U	3
	Total Credit Hours		16		**Total Credit Hours**		16

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 499C Capstone & Senior Thesis I	R/U	2		PHYS 499D Capstone & Senior Thesis II	R/U	1
	UTCH 400 Research Methods	R/U	3		PHYS 412 Light and Physical Optics	R/U	3
	SBS 2 Social/Behavioral Sciences - Elective	G	3		PHYS 411 Thermodynamics	R/U	3
	Minor Elective	R/U	3		Minor Elective	R/U	3
	Minor Elective	R/U	3		Free Elective	E	3
	Total Credit Hours		14		**Total Credit Hours**		13

(E) Elective
(G) General Education Course
(P) Pre-requisite
(R) Required Course
(U) Upper Division Course 300-400 level (you must have 42 hours)

Curriculum Map – Physics Major (Professional Track)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I
HUM II
SBS I
SBS II
NSC I
NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	CHEM 111/111L Principles of Chemistry I & Lab	R	4		CHEM 112/112L Principles of Chemistry II & Lab	R	4
	ENG 100 Writing I	G	3		MATH 175 Calculus I	G/R	4
	PHYS 105 Introduction to Physics & Engineering Professions	R	1		PHYS 181 Introduction to Scientific Computing	R	3
	COMS 108 Fundamentals of Speech	G	3		ENG 200 Writing II	G	3
	FYS 101 First Year Seminar	G	3		SBS I Social/Behavioral Sciences - Elective	G	3
	Total Credit Hours		14		**Total Credit Hours**		17

SECOND YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 231/231L Engineering Physics I & Lab	R	5		PHYS 232/232L Engineering Physics II & Lab	R	5
	MATH 275 Calculus II	R	4		MATH 276 Calculus III	R	4
	HUM I Humanities - Elective	G	3		HUM II Humanities - Elective	G	3
	NSC I Natural Sciences - Elective	G	3		NSC II Natural Sciences - Elective	G	3
	Total Credit Hours		15		**Total Credit Hours**		15

THIRD YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 353 Concepts of Modern Physics I	R/U	4		PHYS 354 Concepts of Modern Physics II	R/U	3
	PHYS 340 Experimental Physics	R/U	3		PHYS 361 Fundamentals of Electronics	R/U	3
	MATH 363 Differential Equations	R/U	3		PHYS 493 Quantum Mechanics	R/U	3
	Minor Elective	R	3		Minor Elective	R	3
	Minor Elective	R	3		Minor Elective	R/U	3
	Total Credit Hours		16		**Total Credit Hours**		15

FOURTH YEAR COURSE SCHEDULE

✓	Fall Semester	Code	Credits	✓	Spring Semester	Code	Credits
	PHYS 499C Capstone & Senior Thesis I	R/U	2		PHYS 499D Capstone & Senior Thesis II	R/U	1
	PHYS 391 Dynamics	R/U	3		PHYS 412 Light and Physical Optics	R/U	3
	SBS 2 Social/Behavioral Sciences - Elective	G	3		PHYS 332 Electricity and Magnetism	R/U	4
	Minor Elective	R/U	3		Minor Elective	R/U	3
	Minor Elective	R/U	3		Free Elective	E	3
	Total Credit Hours		14		**Total Credit Hours**		14

(E) Elective
(G) General Education Course
(P) Pre-requisite
(R) Required Course
(U) Upper Division Course 300-400 level (you must have 42 hours)

MINOR or CERTIFICATE

Creation of a Minor or Certificate
Undergraduate Curriculum Routing Form

Revised January 2019

Minor or Certificate:	Research and Analytical Skills Certificate
Department: (as listed in current catalog)	History, Philosophy, Politics, Global and Legal Studies, School of Humanities and S
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee (Sign and Print) — Date

D. Murphy — (✓) Approved ( ) Disapproved — 10.24.19

Department Chair or Associate Dean (Sign and Print) — Date

Alana Scott Alana Scott — (✓) Approved ( ) Disapproved — 11/18/19

College Curriculum Committee (Sign and Print) — Date

Dan Ewn — ( ) Approved ( ) Disapproved — 11-22-19

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch — (✓) Approved ( ) Disapproved — 12/16/19

Undergraduate Curriculum Committee (Sign and Print) — Date

[signature] — (✓) Approved ( ) Disapproved — 12/16/19

Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Minor or Certificate:	Research and Analytical Skills
Department: (as listed in current catalog)	History, Philosophy, Politics, Global and Legal Studies, School of Humanities and Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

Helpful Information:

1. Important Definitions Used in the Curriculum Process
   - Minor = a set of discipline-specific courses of at least 21 hours
   - Certificate = a series of courses related to a specific topic or skill with a prescribed number of hours. For additional information contact the Office of Academic Programs at 783-2003 or email undergraduate@moreheadstate.edu.
     - More than 50% of certificate credit hours must be 300 level or above and students must have a major on file.
     - Certificate program must be completed in less than one academic year and must be completed in less than 30 credit hours.
     - Completion of a certificate does not replace a minor for program completion.
   - Equated courses vs. cross-listed courses = equated courses are courses of identical content that have different prefixes (and are approved through the undergraduate curriculum process), whereas cross-listed courses have the same instructor and are offered at the same time/location.
   - Pre-requisite = course(s) that a student must successfully complete prior to registering for a more advanced course.
   - Co-requisite = course(s) that a student must take concurrently with another course.

2. Any proposal with a secondary education component must be routed through the Teacher Education Council.

3. The initiator is responsible for tracking a proposal through the approval process.

4. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☑	The title, department, and college names correspond to the current catalog.	☐
☐	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☑	Responses are complete and applicable for each question.	☐
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☐
☑	Each course has been reviewed for pre-requisites, co-requisites or testing requirements. There are no hidden pre-requisites, co-requisites, or testing requirements.	☐
☑	If the proposal is a certificate, more than 50% of the credit hours are 300 level or above.	☐
☑	If the proposal is a certificate, the proposal includes language that students must have a major on file.	☐
☑	If the proposal is a certificate, there is language that the program must be completed in less than one academic year.	☐
☑	If the proposal is a certificate, it contains less than 30 credit hours.	☐
☑	If the proposal is a certificate, there is language in the proposal to indicate that it does not replace a minor for program completion.	☐
☑	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

James R. Masterson — James R. Masterson — 10/22/19

Originator (Sign and Print) — Approval Date

Scott Davison — 10.23.19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

MINOR or CERTIFICATE
Creation of a Minor or Certificate Form

The outline below is to be used for the creation of a minor or certificate. Any new course included in this minor or certificate requires a separate "New Course or Major Revision of Existing Course" proposal. A revision to an existing minor or certificate should use the "Revision of a Minor or Certificate form".

☐ **Creation of a Minor** ☒ **Creation of a Certificate**

- More than 50% of certificate credit hours must be 300 level or above and students must have a major on file.
- Certificate program must be completed in less than one academic year and must be completed in less than 30 credit hours.
- Completion of a certificate does not replace a minor for program completion.

I. MINOR OR CERTIFICATE INFORMATION

State the proposed title of the Minor or Certificate

Research and Analytical Skills

CIP Code	***Contact your department chair or associate dean to verify the correct CIP code information.***
45.0102	

II. NEED AND JUSTIFICATON

A. State the purpose of the Minor or Certificate (what are you doing?).

A certificate in Research and Analytical Skills will provide students with a robust training in research methodology, data collection, descriptive and advanced statistical data analysis, spatial analysis, and data communication skills. Students will learn to use industry-standard software for online survey design and collection, and data and spatial analysis techniques.

The Certificate in Research and Analytical Skills can be completed in one academic year. Student may not earn both the Interdisciplinary Research Minor and this certificate. Students must have an area or major and minor on file, or have earned a college degree. Completion of a certificate program does not replace a minor. Students are responsible for reviewing prequisite courses or seeking permission of instuctor for enrollment in some courses. Students are awarded certificate upon degree completion.

B. State specific reasons for this minor or certificate (why are you doing it?).

Research analysis skills are in high demand among employers. A certificate in Research and Analytics Skills gives students a depth of training in research methodology and demonstrable skills using industry-standard software that are not available in any current program at MSU. Furthermore, for many students in liberal arts programs, a certificate in Research and Analytical Skills helps to demonstrate to potential employers the acquisition of skills needed to fill data/research analyst positions, which complement their training in various liberal arts programs offered on campus.

C. If a similar program exists at MSU or in Kentucky, identify that program and provide justification for the duplication.

None exists

D. List special admission requirements and/or limitations on enrollment.

None

III. GOALS AND OBJECTIVES

A. What are the learning outcomes for the minor or certificate?

1. Student will demonstrate knowledge of and engage in the social scientific research process.
2. Students will demonstrate knowledge of qualitative and quantitative research methods.
3. Students will demonstrate the ability to use industry-standard data and spatial analysis software.
4. Students will learn to create, structure and analyze data to address social and policy problems.
5. Students will demonstrate the ability to apply and interpret descriptive and advanced statistical techniques to analyze data.

B. List the methods of program assessment to be used, other than course grades, to ensure that the desired outcomes or competencies are attained by students. Indicate the frequency of assessment and how results will be made available to program faculty.

Students will complete a portfolio of learning derived from course work created in the core courses. The specific items of the portfolio and the course in which it is required is as follows:
1. Literature Review (SOC 450 Research Methodologies)
2. Research or Grant Proposal, based off of literature review (SOC 450 Research Methodologies)
3. Survey Instrument (COMS 200 Strategic Communications Research)
4. Focus Group Manual (COMS 200 Strategic Communications Research)
5. Research Manuscript using Advanced Statistical Techniques (POLS 200 Methods of Political Inquiry)
6. Research Poster using Advanced Spatial Analysis Techniques (GEO 349 Introduction to GIS)

The following faculty have agreed to review each portfolio according to the attached rubric:
Dr. Timothy Hare (SSWC) - teaches SOC 450 and GEO 349
Dr. Suzanne Tallichet (SSWC) - teaches SOC 450
Dr. Donell Murray (CML) - teaches COMS 200
Dr. James Masterson (HPPGL) - teaches POLS 200
Review of portfolio will take place after a student completes all core courses and submits their portfolio.

C. What are the goals and objectives of this proposal?

1. Prepare students to conduct data analysis in accordance with social scientific research processes using industry-standard software.
2. Prepare students to create, structure and analyze large datasets for descriptive and predictive outcomes using industry-standard software.
3. Prepare students to analyze spatial mapping data for descriptive and predictive outcomes using industry-standard software.

D. Explain how the specific goals and objectives of the minor or certificate relate to the mission statement of the University.

The first clause of the University Mission Statement is to "educate students for success in a global environment" and the second clause is to "engage in scholarship." Businesses, governments, and other organizations, inside and outside of the US, have great needs to analyze organizational and user data by applying scientific research principles. Students who complete this certificate will learn many of the necessary tools, both analytic and software skills, to obtain positions within these organizations across the globe to conduct research scholarship and data analytics.

The proposed certificate is interdisciplinary in nature. As such, it supports the third clause of the University Mission, to "promote diversity of people and ideas." Core courses in the proposed certificate come from four different disciplines; Political Science, Sociology, Communications, and Geography. The fourth clause of the University Mission is to "foster innovation, collaboration, and creative thinking." This is the essense of research methods: to foster innovative and creative ways to solve problems through analyzing data that is collaboratively shared and presented to others for policy recommendations and implemention, strategic development and planning, or continuous improvement of user experience or brand recognition. Whether used for policy or products, for businesses, governments or non-profits, research methods are used to support quality of life improvements in our communities, the final clause of MSU's mission statement.

The proposed certificate in Research and Analytical Methods helps support MSU's Strategic Plan in several ways. First, such a certificate helps MSU recruit engaged students, the first goal of its strategic plan. It does this because such a certificate requires students to learn by doing, not simply by attending lectures, and doing readings and writings. Students in the proposed certificater must be engaged with research methods and data analytics by learning specific industry-standard software through the program, and will compile a portfolio of learning that demonstrates student attainment of research skills throughout the program core.

The proposed certificate also supports the second goal of the University's Strategic Plan under "Academic Success" by offering a high quality program that promotes student success. The proposed program does this by providing students, particularly those majoring in a liberal arts major, with the opportunity to learn industry-standard software used in research and data analytics, which supports their creative and critical thinking skills, among others, attained in most liberal arts programs. This will lead to students aquiring more marketable job skills upon graduation, and thereby leading to higher employment rates after graduation. And last, the proposed certificate also supports the fifth goal of fostering a culture of research that engages students. The objective of this proposed certificate is to create a culture of

research among interested students and engage them in learning about research through the use of industry-standard software for research and data analytics.

IV. IMPACT

A. List all departments and programs that could be impacted by this proposal. For example, any department that:

a. offers required courses for this minor or certificate
b. offers elective courses for this minor or certificate
c. offers similar courses contained in this minor or certificate
d. has an equated course
e. has courses in this proposal listed as a co-requisite or pre-requisite
f. shares staff and/or resources

1. History, Philosophy, Politics, Global and Legal Studies (HPPGL)
2. Sociology, Social Work and Criminology (SSWC)
3. Communications, Media and Languages (CML)
4. Psychology (PSY)
5. Computer Information Systems (CIS)
6. Mathematics (Math)

B. Explain the potential impact on the other departments and programs.

A certificate in Research and Analytical Skills provides students from any major with an opportunity to enhance their social scientific research skills while learning industry-standard software. A certificate in Research and Analytical Skills is particularly complementary to majors found in the following Departments: HPPGL, SSWC, CML. Aside from offering students a new certificate in which to enroll, there are minimum impacts to any other department on campus. However, a certificate in Research and Analytical Skills is likely to draw in new students who may otherwise not attend MSU because of its appeal in providing students with job-ready skills in demand by employers. As such, departments may find an increase in new majors as a result of students coming to MSU due to the opportunities afforded to them by this proposed certificate.

C. List each of the individuals in other departments and programs notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

Dr. Timothy Hare (SSWC) - Face-to-face meeting
Dr. Suzanne Tallichet (SSWC) - Face-to-face meeting
Dr. Donell Murray (CML) - Face-to-face meeting
Dr. Ned Breschel (SSWC) - Email
Dr. Jonathan Nelson (SBA) - Email
Dr. Alana Scott (HPPGA) - Face-to-face meeting
Dr. Christina Conroy (HPPGA) - Face-to-face meeting
Dr. Greg Corso (PSY) - Phone conversation, with proposal sent via Email.
Dr. J. Michael Dobranski (Math) - Email

V. PERSONNEL

A. List the name(s), qualifications including highest earned degree, and academic rank(s) of departmental faculty who will teach courses in this minor or certificate.

Core Courses:
Dr. Timothy Hare (SSWC) - PhD, Anthropology, Professor
Dr. Suzanne Tallichet (SSWC) - PhD, Sociology, Professor
Dr. Donell Murray (CML) - EdD, Education, Instructor
Dr. James Masterson (HPPGL) - PhD, Political Science, Associate Professor
Elective Courses:
Dr. Alana Scott (HPPGL) - PhD, History, Associate Professor
Dr. Christina Conroy (HPPGL) - PhD, Philosophy, Assoicate Professor
Dr. Sam Nararaj (Information Systems) - PhD, Management of Information Systems, Professor
Dr. J. Michael Dobranski (Mathematics) - PhD, Mathematics, Associate Professor

B. Identify external or adjunct faculty, if appropriate.

None needed.

C. List any additional support personnel (clerical, laboratory assistants, and technicians) needed for implementation.

None needed, all courses are already taught.

D. List present and anticipated faculty necessary to offer this minor or certificate. List additional faculty including academic rank and qualifications, who must be employed during the next four years if this is implemented.

Dr. Timothy Hare (SSWC) - PhD, Anthropology, Professor
Dr. Suzanne Tallichet (SSWC) - PhD, Sociology, Professor
Dr. Donell Murray (CML) - EdD, Education, Instructor
Dr. James Masterson (HPPGL) - PhD, Political Science, Associate Professor

VI. ADDITIONAL INFORMATION

A. State the desired implementation date for the minor or certificate.

Fall 2020

B. Anticipated enrollment and number of graduates from this program for the next four years.

Year	Enrollment	Graduates
2020-2021	10	9
2021-2022	12	10
2022-2023	14	12
2023-2024	16	13

C. Explain any additional or remodeled facilities that will be required.

None

D. List any additional equipment required.

None

E. Provide the estimated additional cost required to support this minor or certificate for the next four years. Identify source of new funds (special legislative request, system reallocation, etc.).

None

F. List Special admission requirements and/or limitations on enrollment.

None

G. Program *coherence* refers to: 1) appropriate sequencing of courses, not a mere bundling of credits, so that 2) student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Does the program embody a coherent course of study?

Students will start the certificate with GEO 349 Introducation to GIS and COMS 200 Strategic Communications Research. Students will learn how to conduct spatial analysis and digital mapping techniquies using Arc GIS software in GEO 349. Students will learn the foundations of social scientific research methods, understanding the differences betweeen qualititative and quantitative research, and the technical terms of research methodology in COMS 200. Students in COMS 200, aside from learning foundational principles of social scientific research, will learn how to conduct surveys and focus groups, and will develop questionnare instruments to conduct both types of data collection techniques.

Students will then advance to take SOC 450 Research Methodology and POLS 200 Methods of Political Inquiry. In SOC 450 students will get further training on qualitative and quantitative research methodologies and will learn the social scientific process to conduct research. In POLS 200 students will learn how to work with large datasets, manage, transform and code data and variables, and demonstrate their learning of descriptive and advanced statatistical techniques using industry-standard software (such as SPSS) using social scientific research processes to answers questions of political inqury.

Students will use the skills learned in the core classes to support their learning in the elective course. Skills in research methodology taught throughout the core course are reinforced in each of the elective courses. Skills involving creating anotated bibliographic research found in SOC 450 and COMS 200 are reinforced in HST 300 Practicing History, SOC 455 Qualitative Research Methods, and UTCH 400 Research Methods for Science electives. Skills in database management, data processing, and descriptive and advanced statistical techniques used for predicitve outcomes found in POLS 200 are used to support learning in the following electives: CIS 385 Introduction to Buisness Analytics, POLS 384 Intelligence Analysis, and SOC 451 Quantitative Research Methods. Last, skills using Arc GIS software and mapping analysis taught in GEO 349 Introduction to GIS are built upon in GEO 351 Geographical Information Systems.

No matter which elective course is taken by the student, skills taught in the core courses for this certificate are reinforced with learning that takes place in the elective course.
Additionally, student materials for their required portfolio are accummulated throughout their progession of core classes. For instance, student in SOC 450 complete a literature review and research or grant proposal. Students in COMS 200 develop an annotated biblography, survey instrument and focus group manual. Students in POLS 200 complete a manuscript, with a literature review, research design testing hypothesis, and data anaysis and presentation of the results. Last, in GEO 349 students complete a research project using spatial analytical techniques and present these results in a poster format.

Ideally, students would take GEO 349 and COMS 200 in the fall, and POLS 200 and SOC 450 in the spring, along with one elective course. Students will submit their completed portfolio at the conclusion of their core courses.

H. Please use the template below to list all minor or certificate courses.

Example of different types of entries. Not all minors or certificates will have all types of entries.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MSU	300	Upper level course	3
MSU	400	Variable hour course	1-3
Variable		Free Electives	9

List each specific course required in the minor or certificate. To create additional lines, tab while the cursor is in the last "Course Hours" field.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
Fall			
GEO	349	Introduction to GIS	3
COMS	200	Strategic Communications Research	3
Spring			
POLS	200	Methods of Political Inquiry	3
SOC	450	Research Methodology	3
Electives			3
CIS	385	Introduction to Business Analytics	3
GEO	351	Geographical Information Systems	3
HST	300	Practicing History	3
PHIL	400	Philosophy of Science	3
SOC	451	Quantitative Research Methods	3

SOC	455	Qualitative Research Methods	3
UTCH	400	Research Methods for Science	3

Total Certificate Hours	**15**

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	AGR 351 Emerging Technology in Agriculture
Department: (as listed in current catalog)	Agricultural Sciences Department
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Joyce A. Stubbs / Joyce A. Stubbs (X) Approved ( ) Disapproved 11/12/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GRUPE (X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

Wayne Hill WAYNE MILLER (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Conner (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved 12-12-19

Vice President for Academic Affairs (Sign and Print) — Date

☒	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☒	The syllabus contains a grading description and distribution (please be very specific).	☑
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☒	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Jason P. Holcomb Jason P. Holcomb 11/12/2019

Originator (Sign and Print) Approval Date

Patricia L. Harrelson Patricia L. Harrelson 11-12-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	AGR 361 Applications in Precision Agriculture
Department (as listed in current catalog)	Agricultural Sciences Department
College (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Joyce A. Stubbs (X) Approved ( ) Disapproved 11/13/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRIEPE (X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

Wayne Miller (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

(✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	AGR 361 Applications in Precision Agriculture
Department: (as listed in current catalog)	Agricultural Sciences Department
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☒	The course title, department, and college names correspond to the current catalog.	☑
☒	Course teaching workload, formula, and semesters taught are specified.	☑
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☒	Responses are complete and applicable for each question.	☑
☒	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Jason P. Holcomb — Jason P. Holcomb — 11/12/2019

Originator (Sign and Print) — Approval Date

Patricia L. Harrelson — Patricia L. Harrelson — 11-12-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	AGR 461 Remote Sensing and GIS in Agriculture
Department: (as listed in current catalog)	Agricultural Sciences Department
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Joyce A. Stubbs / Joyce A. Stubbs (X) Approved ( ) Disapproved 11/13/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GROPE (X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corich (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

☒	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☒	The syllabus contains a grading description and distribution (please be very specific).	☑
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☒	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Jason P. Holcomb — Jason P. Holcomb — 11/12/2019

Originator (Sign and Print) — Approval Date

Patricia L. Harrelson — Patricia L. Harrelson — 11-12-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	BIOL 384 Pathologic Basis of Disease (3-0-3)
Department: (as listed in current catalog)	Biology and Chemistry
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Charles Lynch (X) Approved ( ) Disapproved 10/31/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK BUFE (X) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) — Date

Wayne Miller (X) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Dept. Kurt Gibbs (X) Approved ( ) Disapproved 10/31/19

Undergraduate Curriculum Committee (Sign and Print) — Date

Laurie Couch 12/11/19

( ) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☐	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☐
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☐	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Approval Date: 10/31/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date: 10/31/19

MINOR or CERTIFICATE

Minor Revision to an Existing Minor or Certificate
Undergraduate Curriculum Routing Form

Revised January 2019

Program: (as listed in current catalog)	Chemical Dependency Counseling Minor
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology
College (as listed in current catalog)	Caudill College of Arts, Humanties, and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.9.19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 10/31/2019

College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-13-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Green (✓) Approved ( ) Disapproved 12/4/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-4-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Chemical Dependency Counseling Minor
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology
College: (as listed in current catalog)	Caudill College of Arts, Humanties, and Social Sciences

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Dr. Monica Himes — M. Himes by D. Murphy — 10-22-19

Originator (Sign and Print) — Approval Date

Dr. Connie Hardesty — C Hardesty — 10-22-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form
Revised January 2019

MOREHEAD STATE UNIVERSITY

Program: (as listed in current catalog)	Convergent Media Area - Bachelor of Arts
Department: (as listed in current catalog)	Communication, Media and Languages
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Lorraine Nuyo (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott (X) Approved ( ) Disapproved 11/12/19

College Curriculum Committee (Sign and Print) Date

[signature] (✓) Approved ( ) Disapproved 11-21-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) Date

[signature] (✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

☑	If the program has tracks, a separate curriculum map is included for each track.	☑
☑	The curriculum map contains EXACTLY the same courses and the same number of credit-hours as the proposal.	☑
☑	The curriculum map does not contain hidden pre-requisites or co-requisites.	☑
☑	The curriculum map codes are accurate.	☑
☑	If the program has tracks, a separate curriculum map is included for each track.	☑
☑	The total credit hours for each semester are acceptable (full-time, not overload, etc.).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Jeffrey Hill — 10/31/2019

Originator (Sign and Print) — Approval Date

GARY B LAFLEUR — 10/31/2019

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	EEC 241 - Circuit Analysis
Department: (as listed in current catalog)	Computer Science & Electronics (CSE)
College: (as listed in current catalog)	College of Business & Technology - School of Engineering & Computer Science (SECS)

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Ahmad Bayan — (✓) Approved ( ) Disapproved — 10-22-19

Department Chair or Associate Dean (Sign and Print) — Date

Terence Chairs — (✓) Approved ( ) Disapproved — 10/28/19

College Curriculum Committee (Sign and Print) — Date

Corey Russell — (✓) Approved ( ) Disapproved — 10/29/19

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch — (✓) Approved ( ) Disapproved — 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

[signature] — (✓) Approved ( ) Disapproved — 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☐	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

William R. Grise — 10/22/19

Originator (Sign and Print) — Approval Date

Sheila — 10/22/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

MINOR or CERTIFICATE
Revision of a Minor or Certificate
Undergraduate Curriculum Routing Form

January 2019

Minor or Certificate: (as listed in current catalog)	Gender Studies Minor
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee (Sign and Print) — Date

Department Chair or Associate Dean (Sign and Print) — (✓) Approved ( ) Disapproved — 11-12-19 — Date

College Curriculum Committee (Sign and Print) — (✓) Approved ( ) Disapproved — 11-12-19 — Date

Dean (Sign and Print) — (✓) Approved ( ) Disapproved — 11-21-19 — Date

Teacher Ed. Council (if a secondary education program) (Sign and Print) — ( ) Approved ( ) Disapproved — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Undergraduate Curriculum Committee (Sign and Print) — (✓) Approved ( ) Disapproved — 12/16/19 — Date

Vice President for Academic Affairs (Sign and Print) — ( ) Approved ( ) Disapproved — 12-16-19 — Date

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	Each course has been reviewed for pre-requisites, co-requisites or testing requirements. There are no hidden pre-requisites, co-requisites, or testing requirements.	☑
☑	If the proposal is a certificate, more than 50% of the credit hours are 300 level or above.	☑
☑	If the proposal is a certificate, the proposal includes language that students must have a major on file.	☑
☑	If the proposal is a certificate, there is language that the program must be completed in less than one academic year.	☑
☑	If the proposal is a certificate, it contains less than 30 credit hours.	☑
☑	If the proposal is a certificate, there is language in the proposal to indicate that it does not replace a minor for program completion.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Constana Hardesty 11/12/19

Originator (Sign and Print) Approval Date

Scott Dawson 11-12-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	GEO 349 Intro to GIS/Cartography
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities, & Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Chris Howes Chris Howes (X) Approved ( ) Disapproved 10-21-2019
Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.24.19
Department Chair or Associate Dean (Sign and Print) Date

Hana Scott Hana Scott (✓) Approved ( ) Disapproved 11-25-19
College Curriculum Committee (Sign and Print) Date

John Ernst (✓) Approved ( ) Disapproved 11-25-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corver (✓) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

Brad Cliff ( ) Approved ( ) Disapproved 12/6/19
Vice President for Academic Affairs (Sign and Print) Date

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Timothy Hare — Timothy Hare — 10-15-2019

Originator (Sign and Print) — Approval Date

Scott Davison — 10.22.19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	GEO 351 Geographical Information Systems
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities, & Social Sciences

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Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Chris Howes Chris Howes (X) Approved ( ) Disapproved 10-21-2019
Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.24.19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11-25-19
College Curriculum Committee (Sign and Print) Date

John Ernst (✓) Approved ( ) Disapproved 11-25-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corcoran (✓) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

[illegible] (✓) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☐
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☐
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☐
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☐
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☐
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☐
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☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☐
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☑	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Timothy Hare — Timothy Hare — 10-15-2019

Originator (Sign and Print) — Approval Date

Scott Davis — 10-22-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	GEO 353 GIS Applications
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities, & Social Sciences

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Chris Howes Chris Howes (X) Approved ( ) Disapproved 10-21-2019
Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.24.19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11-25-19
College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-25-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch ( ) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
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☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Timothy Hare — Timothy Hare — 10-15-2019

Originator (Sign and Print) — Approval Date

Scott Dawson — 10-22-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	GEO 355 Remote Sensing of the Environment
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies, School of Humanities & Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities, & Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Chris Howes Chris Howes (X) Approved ( ) Disapproved 10-21-2019

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.24.19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott (✓) Approved ( ) Disapproved 11-25-19

College Curriculum Committee (Sign and Print) Date

John Ent (✓) Approved ( ) Disapproved 11-25-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

[signature] (✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
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☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Timothy Hare — Timothy Hare — 10-15-2019

Originator (Sign and Print) — Approval Date

J Scott Davison — 10-22-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	GST 273 Introduction to ~~Women's~~ Gender Studies
Department (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

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Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures ***(Signatures must be handwritten; electronic signatures are not accepted.)***

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 11-12-19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11/19/19

College Curriculum Committee (Sign and Print) Date

John Ernstfon (✓) Approved ( ) Disapproved 11/21/19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GST 273
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Constance Hardesty — 11/5/19 — Approval Date

Department Curriculum Committee Chair (Sign and Print) — Sept Division — 11-5-19 — Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	GST 337 Sociology of Food
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved
Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.
Departmental Curriculum Committee

(✓) Approved ( ) Disapproved 11-12-19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11/19/19
College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-21-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12-17-19
Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-18-19
Vice President for Academic Affairs (Sign and Print) Date

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☐
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☐
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Constance Hardesty 11/12/19

Originator (Sign and Print) Approval Date

Scott Dawson 11-12-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	GST 355 Sociology of the Body
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

(✓) Approved ( ) Disapproved 11-12-19

Department Chair or Associate Dean (Sign and Print) — Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11-19-19

College Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved 11-21-19

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Conch Laurie Conch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Constance Hardesty 11/12/19

Originator (Sign and Print) Approval Date

Scott Davison 11-12-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	GST 397 (to 300) SOCIAL STRATIFICATION
Department (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 11-12-19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11-19-19

College Curriculum Committee (Sign and Print) Date

[signature] (✓) Approved ( ) Disapproved 11-21-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12-18-19

Undergraduate Curriculum Committee (Sign and Print) Date

[signature] (✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GST 397
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The course title, department, and college names correspond to the current catalog.	☑
☑	Course teaching workload, formula, and semesters taught are specified.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Constance Hardesty 11/5/19

Originator (Sign and Print) Approval Date

Scott Davison 11-5-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form
Revised January 2018

Course (as listed in current catalog)	GST 490 ~~Integrative Capstone in Women's Studies~~ Gender Studies Capstone
Department (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

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Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Mangelos — (✓) Approved ( ) Disapproved — 11-12-19
Department Chair or Associate Dean (Sign and Print) — Date

Alana Scott Alana Scott — (✓) Approved ( ) Disapproved — 11-19-19
College Curriculum Committee (Sign and Print) — Date

(✓) ~~Approved~~ ( ) Disapproved — 11-21-19
Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch — (✓) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved — 12-16-19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	GST 490
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☑	The course title, department, and college names correspond to the current catalog.	☐
☑	Course teaching workload, formula, and semesters taught are specified.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☑	Responses are complete and applicable for each question.	☐
☑	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Constance Hardesty 11/5/19

Originator (Sign and Print) Approval Date

Scott Dalton 11-5-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form
Revised September 2016

Course:	HLTH 301 Health, Safety and Nutrition for Early Elementary
Department:	
College	Kinesiology, Health, and Imaging Sciences

Signatures

Manuel Probst — 10-21-19
Originator (Print and Sign) — Date

Jennifer Dearden — (✓) Approved ( ) Disapproved — 10.16.19
Departmental Curriculum Committee Approval (Print and Sign) — Date

Manuel Probst — (✓) Approved ( ) Disapproved — 10-21-19
Department Chair's Approval (Print and Sign) — Date

DIRK GRUPE — (✓) Approved ( ) Disapproved — 2019-Nov-18
College Curriculum Committee Approval (Print and Sign) — Date

WAYNE MILLER — (✓) Approved ( ) Disapproved — 11/18/2019
Dean's Approval (Print and Sign) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council Approval (if appropriate) (Print and Sign) — Date

Laurie Couch — (✓) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee Action (Print and Sign) — Date

(✓) Approved ( ) Disapproved — 12-16-19
Vice President for Academic Affairs (Print and Sign) — Date

For Academic Programs Office Use Only

Date proposal received in Academic Programs Office: _____

Date Academic Programs notified SAC's Liaison: _____

Deleted Program Suspension Date: _____ Final Program Deletion Date: _____

SACS Response: ☐ Approved ☐ Denied ☐ Revision Required SAC's Response Date: _____

Date Academic Programs notified of SAC's Response: _____ CPE Notification Date: _____

PROGRAM
Minor Revision to an Existing Program
Undergraduate Curriculum Routing Form

Revised January 2019

Program: (as listed in current catalog)	Legal Studies Area BA
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy Dianna Murphy — (✓) Approved ( ) Disapproved — 10.24.19
Department Chair or Associate Dean (Sign and Print) — Date

Alana Scott Alana Scott — (✓) Approved ( ) Disapproved — 10/31/2019
College Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved — 11-13-19
Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Conner — (✓) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved — 12-16-19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Legal Studies Area BA
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College: (as listed in current catalog)	Caudill College of Artis, Humanities and Social Sciences

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

D. Murphy Dianna Murphy 10.24.19

Originator (Sign and Print) Approval Date

Scott Davison 10-22-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

PROGRAM
Minor Revision to an Existing Program
Undergraduate Curriculum Routing Form

Revised January 2019

Program: (as listed in current catalog)	Legal Studies Major BA
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures ***(Signatures must be handwritten; electronic signatures are not accepted.)***

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy Dianna Murphy (✓) Approved ( ) Disapproved 10.24.19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 10/31/2019
Coliege Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-13-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Conat (✓) Approved ( ) Disapproved 12/10/19
Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Legal Studies
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College: (as listed in current catalog)	Caudill College of Artis, Humanities and Social Sciences

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

D. Murphy Dianna Murphy — 10.24.19

Originator (Sign and Print) — Approval Date

Scott Davison — 10-22-19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

PROGRAM
Minor Revision to an Existing Program
Undergraduate Curriculum Routing Form

Revised January 2019

Program: (as listed in current catalog)	Legal Studies Minor
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

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Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy Dianna Murphy — (✓) Approved ( ) Disapproved — 10.24.19
Department Chair or Associate Dean (Sign and Print) — Date

Alana Scott Alana Scott — (✓) Approved ( ) Disapproved — 10/31/2019
College Curriculum Committee (Sign and Print) — Date

Erin — (✓) Approved ( ) Disapproved — 11-13-19
Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch — (✓) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee (Sign and Print) — Date

[signature] — (✓) Approved ( ) Disapproved — 12-16-19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Legal Studies
Department: (as listed in current catalog)	History, Philosophy, Politics, Global Studies and Legal Studies
College: (as listed in current catalog)	Caudill College of Artis, Humanities and Social Sciences

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☐
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

D. Murphy Dianna Murphy 10.24.19

Originator (Sign and Print) Approval Date

Scott Davison 10-22-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 090 Pre-Algebra
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee — Chris Schroeder — (✓) Approved ( ) Disapproved — 11/1/19
Department Chair or Associate Dean (Sign and Print) — Date

College Curriculum Committee (Sign and Print) — Dirk Grunwald — (✓) Approved ( ) Disapproved — 2019-Nov-18
Date

Dean (Print and Sign) — Wayne Micek — (✓) Approved ( ) Disapproved — 11/18/2019
Date

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — ( ) Approved ( ) Disapproved
Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch — (✓) Approved ( ) Disapproved — 12/4/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) — Date

Laurie Couch — (✓) Approved ( ) Disapproved — 12/4/19
Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved — 12-4-19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 091 Beginning Algebra
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee
Chris Schroeder (X) Approved ( ) Disapproved 11/1/19
Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUPE (X) Approved ( ) Disapproved 2019-Nov-18
College Curriculum Committee (Sign and Print) Date

Wayne Micek (X) Approved ( ) Disapproved 11/18/2019
Dean (Print and Sign) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch (X) Approved ( ) Disapproved 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch (X) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

(X) Approved ( ) Disapproved 12-6-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

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Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Chris Schroeder — 11/1/19 Approval Date

Department Curriculum Committee Chair (Sign and Print) — Josh Qualls — 11/1/19 Approval Date

COURSE
Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 091A Beginning Algebra, Module A
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee — Chris Schroeder — (X) Approved ( ) Disapproved — 11/1/19
Department Chair or Associate Dean (Sign and Print) — Date

DIRK GROPE — ( ) Approved ( ) Disapproved — 2019-Nov-8
College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER — (X) Approved ( ) Disapproved — 11/18/2019
Dean (Print and Sign) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Cook — ( ) Approved ( ) Disapproved — 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) — Date

Laurie Cook — ( ) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved — 12/16/19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form
Revised January 2018

Course: (as listed current catalog)	MATH 091B Beginning Algebra, Module B
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee
Chris Schroeder (X) Approved ( ) Disapproved 11/1/19
Department Chair or Associate Dean (Sign and Print) Date

DIRK GROFF (X) Approved ( ) Disapproved 2019-Nov-18
College Curriculum Committee (Sign and Print) Date

WAYNE MILLER (X) Approved ( ) Disapproved 11/18/2019
Dean (Print and Sign) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

(X) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
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☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 091C Beginning Algebra, Module C
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee — Chris Schroede — (X) Approved ( ) Disapproved — 11/1/19
Department Chair or Associate Dean (Sign and Print) — Date

College Curriculum Committee (Sign and Print) — DIRK GRUPE — (X) Approved ( ) Disapproved — 2019-Nov-18
Date

Dean (Print and Sign) — ANNE MILLER — (X) Approved ( ) Disapproved — 11/19/2019
Date

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — ( ) Approved ( ) Disapproved
Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch — Laurie Couch — ( ) Approved ( ) Disapproved — 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) — Date

Laurie Couch — Laurie Couch — ( ) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved — 12-16-19
Vice President for Academic Affairs (Sign and Print) — Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
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☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 093 Intermediate Algebra
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

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The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUIS (X) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) Date

WAYNE MILLER (X) Approved ( ) Disapproved 11/18/2019

Dean (Print and Sign) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/10/19

AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(X) Approved ( ) Disapproved 12-6-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
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My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 093A Intermediate Algebra, Module A
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee
Chris Schroeder (X) Approved ( ) Disapproved 12/1/19
Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUPE (X) Approved ( ) Disapproved 2019-Nov-8
College Curriculum Committee (Sign and Print) Date

Wayne Miller (X) Approved ( ) Disapproved 11/15/2019
Dean (Print and Sign) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch (X) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

(X) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

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Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

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☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 093B Intermediate Algebra, Module B
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee
Chris Schroeder (X) Approved ( ) Disapproved 11/1/19
Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUIK (X) Approved ( ) Disapproved 2019-Nov-18
College Curriculum Committee (Sign and Print) Date

Wayne Miller (X) Approved ( ) Disapproved 11/18/2019
Dean (Print and Sign) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/11/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/11/19
Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Wells — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE

Course Deletion/Suspension/Reinstatement
Undergraduate Curriculum Routing Form

Revised January 2018

Course: (as listed current catalog)	MATH 093C Intermediate Algebra, Module C
Department: (as listed current catalog)	Department of Mathematics
College: (as listed current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUNE (X) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) Date

WAYNE MICOLE (X) Approved ( ) Disapproved 11/18/2019

Dean (Print and Sign) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/11/19

AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Mathematics
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	All impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, or shares staff and/or resources.	☑
☑	Notification has been made to all departments that list this course as a required course in their program.	☑
☑	Responses are complete and applicable for each question.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	MATH 231 Mathematics for the Elementary Teacher I
Department (as listed in current catalog)	Department of Mathematics
College (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/8/19

Department Chair or Associate Dean (Sign and Print) Date

DIPA GUPTE (✓) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

WAYNE MILLER (✓) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

Chris Miller (✓) Approved ( ) Disapproved 12/6/19

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laura Conca ( ) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	MATH 231 Mathematics for the Elementary Teacher I
Department: (as listed in current catalog)	Department of Mathematics
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The course title, department, and college names correspond to the current catalog.	☒
☒	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☒
☒	Responses are complete and applicable for each question.	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder — 11/8/19

Originator (Sign and Print) — Approval Date

Joshua Qualls — 11/14/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	MATH 320 Codes and Cryptography
Department (as listed in current catalog)	Mathematics
College (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUIK (X) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) Date

Wayne Miller (X) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch (X) Approved ( ) Disapproved 12/1/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	MATH 320 Codes and Cryptography
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☒	The curriculum proposal form has not been altered (formatting, font, etc.).	☒
☒	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☒
☒	The course title, department, and college names correspond to the current catalog.	☒
☒	Course teaching workload, formula, and semesters taught are specified.	☒
☒	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☒
☒	Responses are complete and applicable for each question.	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Josh Qualls — 4/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 9/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	MATH 360 Tensors/Differential Geometry
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	College of Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (✓) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GRUPE (✓) Approved ( ) Disapproved 2019-Nov-18

College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER (✓) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Conch (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

☒	The syllabus contains the instructor's office phone number and office hours schedule.
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.
☒	The syllabus contains a grading description and distribution (please be very specific).
☒	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.01).
☒	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/
☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.
☒	The entire proposal is saved as one Word document.

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Josh Qualls — 11/1/19

Originator (Sign and Print) — Approval Date

Josh Qualls — 11/1/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form
Revised January 2019

Program: (as listed in current catalog)	Mathematics Area - Bachelor of Science
Department: (as listed in current catalog)	Mathematics
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Chris Schroeder (X) Approved ( ) Disapproved 11/1/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GROPE (X) Approved ( ) Disapproved 2019/11/18

College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER (X) Approved ( ) Disapproved 11/18/2019

Dean (Sign and Print) — Date

Chris Miller (X) Approved ( ) Disapproved 12/6/19

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch (X) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

☒	If the program has tracks, a separate curriculum map is included for each track.	☐
☒	The curriculum map contains EXACTLY the same courses and the same number of credit-hours as the proposal.	☒
☒	The curriculum map does not contain hidden pre-requisites or co-requisites.	☒
☒	The curriculum map codes are accurate.	☒
☒	If the program has tracks, a separate curriculum map is included for each track.	☒
☒	The total credit hours for each semester are acceptable (full-time, not overload, etc.).	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Chris Schroeder / Mike Dobranski 11/1/19

Originator (Sign and Print) Approval Date

Josh Qualls 11/1/19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form
Revised September 2016

Course:	PHED 205 Lifetime Fitness
Department:	Kinesiology, Health, and Imaging Sciences
College	Science

Signatures

Manuel Probst — 10-21-19
Originator (Print and Sign) — Date

Jennifer Dearden — (✓) Approved ( ) Disapproved — 10.16.19
Departmental Curriculum Committee Approval (Print and Sign) — Date

Manuel Probst — ( ) Approved ( ) Disapproved — 10-21-19
Department Chair's Approval (Print and Sign) — Date

DIRK GRUNE — (✓) Approved ( ) Disapproved — 2019-Nov-18
College Curriculum Committee Approval (Print and Sign) — Date

WAYNE MILLER — (✓) Approved ( ) Disapproved — 11/18/2019
Dean's Approval (Print and Sign) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council Approval (if appropriate) (Print and Sign) — Date

Laurie Caver — ( ) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee Action (Print and Sign) — Date

( ) Approved ( ) Disapproved
Vice President for Academic Affairs (Print and Sign) — Date

For Academic Programs Office Use Only

Date proposal received in Academic Programs Office: _____

Date Academic Programs notified SAC's Liaison: _____

Deleted Program Suspension Date: _____ Final Program Deletion Date: _____

SACS Response: ☐ Approved ☐ Denied ☐ Revision Required SAC's Response Date: _____

Date Academic Programs notified of SAC's Response: _____ CPE Notification Date: _____

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised September 2016

Course:	PHED 326 Exercise Program Leadership
Department:	Kinesiology, Health and Imaging Sciences
College	Science

Signatures

Manuel Probst — 10-21-19
Originator (Print and Sign) — Date

Jennifer Dearden — (✓) Approved ( ) Disapproved — 10.16.19
Departmental Curriculum Committee Approval (Print and Sign) — Date

Manuel Probst — (✓) Approved ( ) Disapproved — 10-21-19
Department Chair's Approval (Print and Sign) — Date

DIRK GROPE — (✓) Approved ( ) Disapproved — 2019-Nov-19
College Curriculum Committee Approval (Print and Sign) — Date

WAYNE MILLER — (X) Approved ( ) Disapproved — 11/18/2019
Dean's Approval (Print and Sign) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council Approval (if appropriate) (Print and Sign) — Date

Laurie Couch — (✓) Approved ( ) Disapproved — 12/10/19
Undergraduate Curriculum Committee Action (Print and Sign) — Date

(✓) Approved ( ) Disapproved — 12-Dec-19
Vice President for Academic Affairs (Print and Sign) — Date

For Academic Programs Office Use Only

Date proposal received in Academic Programs Office: _____

Date Academic Programs notified SAC's Liaison: _____

Deleted Program Suspension Date: _____ Final Program Deletion Date: _____

SACS Response: ☐ Approved ☐ Denied ☐ Revision Required SAC's Response Date: _____

Date Academic Programs notified of SAC's Response: _____ CPE Notification Date: _____

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form
Revised September 2016

Course:	PHED 432 Physiology of Exercise
Department:	Kinesiology, Health and Imaging Sciences
College	Science

Signatures

Manuel Probst Manuel Probst — 10-01-19
Originator (Print and Sign) — Date

Jennifer Dearden — (✓) Approved ( ) Disapproved — 10.16.19
Departmental Curriculum Committee Approval (Print and Sign) — Date

Manuel Probst — (X) Approved ( ) Disapproved — 10-21-19
Department Chair's Approval (Print and Sign) — Date

DIRK 6/10/15 — (✓) Approved ( ) Disapproved — 2019-Nov-18
College Curriculum Committee Approval (Print and Sign) — Date

WAYNE MILLER — (✓) Approved ( ) Disapproved — 11/18/2019
Dean's Approval (Print and Sign) — Date

( ) Approved ( ) Disapproved
Teacher Ed. Council Approval (if appropriate) (Print and Sign) — Date

Laurie Cowell — (✓) Approved ( ) Disapproved — 12/11/19
Undergraduate Curriculum Committee Action (Print and Sign) — Date

( ) Approved ( ) Disapproved
Vice President for Academic Affairs (Print and Sign) — Date

For Academic Programs Office Use Only

Date proposal received in Academic Programs Office: _____

Date Academic Programs notified SAC's Liaison: _____

Deleted Program Suspension Date: _____ Final Program Deletion Date: _____

SACS Response: ☐ Approved ☐ Denied ☐ Revision Required SAC's Response Date: _____

Date Academic Programs notified of SAC's Response: _____ CPE Notification Date: _____

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 201: Elementary Physics I
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

Thomas Iannuli — Thomas Iannuli — 10/31/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

(X) Approved ( ) Disapproved — 10/31/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GRUPE — (X) Approved ( ) Disapproved — 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

Wayne Miller — (X) Approved ( ) Disapproved — 11/20/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corbett — ( ) Approved ( ) Disapproved — 12/11/19

Undergraduate Curriculum Committee (Sign and Print) — Date

( ) Approved ( ) Disapproved — 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

☒	The syllabus contains the instructor's office phone number and office hours schedule.	☒
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☒
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☒
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☒
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☒
☒	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☒
☒	The syllabus contains a grading description and distribution (please be very specific).	☒
☐	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☒
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☒	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☒
☒	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Ignacio Birriel 10/31/19

Originator (Sign and Print) Approval Date

Thomas Pannuti

Thomas Pannuti 10/31/19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 202: Elementary Physics II
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Thomas Painuti Date 10/31/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

☒ Approved ( ) Disapproved 10/31/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUPE ☒ Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

WAYNE MILLER ☒ Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Coker ☒ Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

☒ Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

☒	The syllabus contains the instructor's office phone number and office hours schedule.	☒
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☒
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☒
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☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

[signature] Ignacio Birriel 10/31/19

Originator (Sign and Print) Approval Date

[signature] Thomas Pannuti 10/31/19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 231: Engineering Physics I
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

Thomas Pannuti Thomas Pannuti 10/28/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Eric Jerde ERIC JERDE (X) Approved ( ) Disapproved 10/28/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUPE (X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

Wayne Miller WAYNE MILLER (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corich (✓) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12/16/19

Vice President for Academic Affairs (Sign and Print) Date

☒	The syllabus contains the instructor's office phone number and office hours schedule.
☒	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.
☒	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.
☒	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.
☒	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.
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☐	The entire proposal is saved as one Word document.

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

[signature]	Ignacio Birriel	10/28/19
Originator (Sign and Print)		Approval Date
[signature]	Thomas Pannuti	10/28/19
Department Curriculum Committee Chair (Sign and Print)		Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 232: Engineering Physics II
Department: (as listed in current catalog)	Physics, Earth Science and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

Thomas Pannuti Thomas Pannuti 10/28/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

ERIC JEROE (X) Approved ( ) Disapproved 10/28/19

Department Chair or Associate Dean (Sign and Print) Date

DIRK GRUPE (X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

WAYNE MILLER (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Corley Laurie Corley ( ) Approved ( ) Disapproved 12/11/19

Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 1-27-20

Vice President for Academic Affairs (Sign and Print) Date

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
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Originator (Sign and Print) — Ignacio Birriel — Approval Date: 10/28/19

Department Curriculum Committee Chair (Sign and Print) — Thomas Pannuti — Approval Date: 10/28/19

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form
Revised April 2019

This is a ☐ **New Course** ☒ **Revised Course**

Course: (if revision, as listed in current catalog)	PHYS 270: Introduction to Scientific Computing to PHYS 181
Department: (as listed in current catalog)	Physics, Earth Science, & Space Systems Engineering
College: (as listed in current catalog)	Science

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( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) Date

Thomas Pannuti Thomas Pannuti 10/28/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Eric Jerde ERIC JERDE (X) Approved ( ) Disapproved 10/28/19

Department Chair or Associate Dean (Sign and Print) Date

(X) Approved ( ) Disapproved 2019-Nov-20

College Curriculum Committee (Sign and Print) Date

Wayne Miller WAYNE MILLER (X) Approved ( ) Disapproved 11/20/2019

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 12/16/19

Vice President for Academic Affairs (Sign and Print) Date

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☒	The entire proposal is saved as one Word document.

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Ignacio Birriel — 10/28/19

Originator (Sign and Print) — Approval Date

Thomas Pannuti — 10/28/19

Department Curriculum Committee Chair (Sign and Print) — Approval Date

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form
Revised January 2019

Program: (as listed in current catalog)	Physics Area - Bachelor of Science
Department: (as listed in current catalog)	Physics, Earth Science, and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

Thomas Panniti — 10/28/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

ERIC JERDE — (X) Approved ( ) Disapproved — 10/28/19

Department Chair or Associate Dean (Sign and Print) — Date

DIRK GRUPE — (X) Approved ( ) Disapproved — 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

WAYNE MILLER — (X) Approved ( ) Disapproved — 11/20/2019

Dean (Sign and Print) — Date

Chris Miller — (✓) Approved ( ) Disapproved — 12/6/19

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch — Laurie Couch — (✓) Approved ( ) Disapproved — 12/16/19

Undergraduate Curriculum Committee (Sign and Print) — Date

(✓) Approved ( ) Disapproved — 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

☒	If the program has tracks, a separate curriculum map is included for each track.	☒
☒	The curriculum map contains EXACTLY the same courses and the same number of credit-hours as the proposal.	☒
☒	The curriculum map does not contain hidden pre-requisites or co-requisites.	☒
☒	The curriculum map codes are accurate.	☒
☒	If the program has tracks, a separate curriculum map is included for each track.	☒
☒	The total credit hours for each semester are acceptable (full-time, not overload, etc.).	☒
☒	The entire proposal is saved as one Word document.	☒

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Ignacio Barrio — Approval Date: 10/28/19

Department Curriculum Committee Chair (Sign and Print) — Thomas Pannuti — Approval Date: 10/28/19

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form
Revised January 2019

Program: (as listed in current catalog)	Physics Major - Bachelor of Science
Department: (as listed in current catalog)	Physics, Earth Science, and Space Systems Engineering
College: (as listed in current catalog)	Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

( ) Approved ( ) Disapproved

Information Technology Resources Are Available (Sign and Print) — Date

Thomas Pannuti — Thomas Pannuti — 10/28/19

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Eric Jerde — ERIC JERDE — (X) Approved ( ) Disapproved — 10/28/19

Department Chair or Associate Dean (Sign and Print) — Date

Dirk Grupe — DIRK GRUPE — (X) Approved ( ) Disapproved — 2019-Nov-20

College Curriculum Committee (Sign and Print) — Date

Wayne Miller — WAYNE MILLER — (X) Approved ( ) Disapproved — 11/20/2019

Dean (Sign and Print) — Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if program is a secondary education program) (Sign and Print) — Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Conch — Laurie Conch — (X) Approved ( ) Disapproved — 12/16/19

Undergraduate Curriculum Committee (Sign and Print) — Date

(X) Approved ( ) Disapproved — 12-16-19

Vice President for Academic Affairs (Sign and Print) — Date

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☑	The curriculum map codes are accurate.	☑
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☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Originator (Sign and Print) — Ignacio Birriel — 10/28/19
Approval Date

Department Curriculum Committee Chair (Sign and Print) — Thomas Pannuti — 10/28/19
Approval Date

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	SOC 300 Social Stratification
Department (as listed in current catalog)	Sociology, Social Work and Criminology; School of Hum and SS
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 11-5-19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott (✓) Approved ( ) Disapproved 11-12-19

College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-19-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	SOC 300
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Bernadette Barton Bernadette Barton — 11/5/19

Originator (Sign and Print) — Approval Date

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	SOC/SWK/CRIM 337 Sociology of Food
Department (as listed in current catalog)	Sociology, Social Work, and Criminology, School of Humanities and Social Sciences
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

C. Murphy (✓) Approved ( ) Disapproved 11-5-19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11-12-19

College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-21-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	SOC/SWK/CRIM 337
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology, School of Humanities and Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Science

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Bernadette Barton Bernadette Barton 11/5/19

Originator (Sign and Print) Approval Date

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	SOC/SWK/CRIM 355 Sociology of the body
Department (as listed in current catalog)	Sociology, Social Work, and Criminology, School of Humanities and Social Sciences
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 11-5-19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11/12/19
College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-21-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19
Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	SOC 355/SWK/CRIM 355
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology, School of Humanities and Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Bernadette Barton Bernadette Barton 11/5/19

Originator (Sign and Print) Approval Date

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course

Use this outline to report a minor modification of a previously approved course and to equate a *current* course with a new course. Minor revisions include title, prefix, course number, catalog course description, and admission requirements (test scores, pre-requisites, or co-requisites). ***Minor changes do not modify course content or the course formula.*** If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

I. COURSE

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Faculty Load	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
Current Course Name: (as listed in the current catalog)	SOC	355	Sociology of the Body	3	3-0-3	Spring
Proposed Course Name:	SWK CRIM Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Faculty Load	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
	GST	~~337~~ 355	Sociology of the Body	3	3-0-3	Spring

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

This course is currently equated with Social Work and Criminology. This revision will also equate the course with Gender Studies

B. List all other departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Gender Studies is the only other program that will be impacted.

C. Explain the potential impact on the other departments and programs.

This will add another elective to the Gender Studies program.

D. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

Dr. Bernadette Barton, Director of Gender studies was notified in person and by email.

III. ADDITIONAL INFORMATION

A. If this is a change that effects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

SOC 355 Sociology of the Body

(3-0-3) An introduction to the sociological study of the body. Students explore the multifaceted interplay

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form
Revised January 2019

Program: (as listed in current catalog)	Bachelor of Social Work
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology
College: (as listed in current catalog)	Caudill College of Arts, Humanities, and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Tony S Moore (✓) Approved ( ) Disapproved 10-22-19
Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.
Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.22.19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 10/31/2019
College Curriculum Committee (Sign and Print) Date

Eva (✓) Approved ( ) Disapproved 11-13-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19
Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved
Vice President for Academic Affairs (Sign and Print) Date

☑	If the program has tracks, a separate curriculum map is included for each track.	☐
☑	The curriculum map contains EXACTLY the same courses and the same number of credit-hours as the proposal.	☐
☑	The curriculum map does not contain hidden pre-requisites or co-requisites.	☐
☑	The curriculum map codes are accurate.	☑
☑	If the program has tracks, a separate curriculum map is included for each track.	☑
☑	The total credit hours for each semester are acceptable (full-time, not overload, etc.).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

M. Kennedy D. Murphy Dr. Monica Himes 10.22.19

Originator (Sign and Print) Approval Date

Constance Hardesty 10-22-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

PROGRAM/MINOR/CERTIFICATE

Deletion/Reinstatement for Program or Minor or Certificate
Undergraduate Curriculum Routing Form

January 2018

Program/Minor/Certificate: (as listed in the current catalog)	Spanish Major with Teacher Certification (P-12) BA
Department: (as listed in the current catalog)	Communications, Media and Languages
College: (as listed in the current catalog)	Caudill College of Arts. Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Dept's Gary B. Lafleur GARY B. LAFLEUR (✓) Approved ( ) Disapproved 9/24/19
Department Chair or Associate Dean (Sign and Print) Date

Layne Neeper Layne Neeper (✓) Approved ( ) Disapproved 9/25/19
College Curriculum Committee (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 10/14/19
Dean (Print and Sign) Date

John Ernst John Ernst ( ) Approved ( ) Disapproved 10-15-19
Teacher Ed. Council (if program, is a secondary education program) (Sign and Print) Date

Approved 10/16/19

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/18/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/18/19
Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 12/18/19
Vice President for Academic Affairs (Sign and Print) Date

For Academic Programs Office Use Only _____Program _____Minor _____Certificate

Official Suspension Date: _____ Date CPE Notified of Suspension: _____

For CPE reporting purposes, a deleted program will be marked as suspended for a minimum of 2 years and a maximum of 5 years to allow for the teach-out plan.

Date AVP UESS notified SAC's Liaison: 12/18/19 SAC's Response Date: _____

Date AVP UESS notified of SAC's Response: _____ SACS Response: ☐ Approved ☐ Denied ☐ Revision Required

Last Catalog Date: _____ Date CPE Notified of Deletion: _____ Program/Minor/Certificate Final Deletion Date: _____

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Spanish Major with Teacher Certification (P-12)
Department: (as listed in current catalog)	Communications, Media and Languages
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. The originator of the proposal should make such edits. The originator also may be asked to address questions (in writing or in person) at any level of review.
3. Students must be admitted to the Program until the proposal has been approved.
4. The program will remain in the catalog until the fall after the proposal is approved.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Students have ample time to finish all the required and elective courses in the teach-out plan.	☑
☑	The teach-out plan is inserted into the proposal.	☑
☑	The sample student notification letter is inserted into the proposal.	☑
☑	If this is a collaborative or joint program with another institution, the signed teach-out agreements with the other institution(s) are attached.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Philip Krumnacich PHILIP KRUMNACH 08/30/19

Originator (Sign and Print) Approval Date

Gary B. LaFleur GARY B. LAFLEUR 9/24/19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	SWK 394 Introduction to Addictions
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology
College: (as listed in current catalog)	Caudill College of Arts, Humanities, and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Corey S. Moore (✓) Approved ( ) Disapproved 10-22-19

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

(✓) Approved ( ) Disapproved 10.22.19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 10/31/19

College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-13-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

M. Himes by D. Murphy DR. Monica Himes 10·22·19

Originator (Sign and Print) Approval Date

C. Hardesty Constance Hardesty 10-22-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	SOC/SWK/CRIM 337 Sociology of Food
Department (as listed in current catalog)	Sociology, Social Work, and Criminology, School of Humanities and Social Sciences
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Science

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Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

C. Murphy (✓) Approved ( ) Disapproved 11-5-19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11-12-19

College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-21-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	SOC/SWK/CRIM 337
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology, School of Humanities and Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Science

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Please note: it is the initiator's responsibility to track a proposal through the approval process.

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The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Bernadette Barton Bernadette Barton 11/5/19

Originator (Sign and Print) Approval Date

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course

Use this outline to report a minor modification of a previously approved course and to equate a *current* course with a new course. Minor revisions include title, prefix, course number, catalog course description, and admission requirements (test scores, pre-requisites, or co-requisites). ***Minor changes do not modify course content or the course formula.*** If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

I. COURSE

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Faculty Load	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
Current Course Name: (as listed in the current catalog)	SOC	337	Sociology of Food	3	3-0-3	fall
Proposed Course Name:	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Faculty Load**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	GST	337	Sociology of Food	3	3-0-3	Fall

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

This course is currently equated with Social Work and Criminology. This revision will also equate the course with Gender Studies

B. List all other departments and programs that could be impacted by this proposal. For example, any department or program that:

a. requires the course
b. offers the course as an elective
c. offers a similar course
d. has an equated course
e. has the course listed as a co-requisite or pre-requisite
f. shares staff and/or resources

Gender Studies is the only other program that will be impacted.

C. Explain the potential impact on the other departments and programs.

This will add another elective to the Gender Studies program.

D. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

Dr. Bernadette Barton, Director of Gender studies was notified in person and by email.

III. ADDITIONAL INFORMATION

A. If this is a change that effects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

SOC 337 Sociology of Food
(3-0-3) A sociological analysis of the politics, economy and culture of food. Topics include food

consumption patterns, body image, health, and eating disorders; food and individual, community and cultural identity; class, ethnic, and gender based food patterns; modern food production patterns, inequality and the environment; social food movements and social justice. Equates with CRIM 337 and SWK 337 and GST 337.
Credits
3

Please insert (paste) any supporting documentation here. If you have no supporting information, please remove this section from your proposal.

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	SOC/SWK/CRIM 355 Sociology of the body
Department (as listed in current catalog)	Sociology, Social Work, and Criminology, School of Humanities and Social Sciences
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 11-5-19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 11/12/19
College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-21-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19
Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	SOC 355/SWK/CRIM 355
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology, School of Humanities and Social Sciences
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Science

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Bernadette Barton Bernadette Barton 11/5/19

Originator (Sign and Print) Approval Date

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE
Minor Revision to an Existing Course

Use this outline to report a minor modification of a previously approved course and to equate a *current* course with a new course. Minor revisions include title, prefix, course number, catalog course description, and admission requirements (test scores, pre-requisites, or co-requisites). ***Minor changes do not modify course content or the course formula.*** If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

I. COURSE

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Faculty Load	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
Current Course Name: (as listed in the current catalog)	SOC	355	Sociology of the Body	3	3-0-3	Spring
Proposed Course Name:	SWK CRIM Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Faculty Load	Formula (Example: 3-0-3)	Intended Terms Offered (Example: Fall/Spring)
	GST	~~337~~ 355	Sociology of the Body	3	3-0-3	Spring

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

This course is currently equated with Social Work and Criminology. This revision will also equate the course with Gender Studies

B. List all other departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

Gender Studies is the only other program that will be impacted.

C. Explain the potential impact on the other departments and programs.

This will add another elective to the Gender Studies program.

D. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

Dr. Bernadette Barton, Director of Gender studies was notified in person and by email.

III. ADDITIONAL INFORMATION

A. If this is a change that effects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

SOC 355 Sociology of the Body

(3-0-3) An introduction to the sociological study of the body. Students explore the multifaceted interplay

between culture, groups, identity, the Self, and the body. The social and cultural construction of bodies related to inequality based on race, class, gender, sexuality, disability and other dimensions are examined. Equated with SWK 355 and CRIM 355 and GST 355.
Credits
3

Please insert (paste) any supporting documentation here. If you have no supporting information, please remove this section from your proposal.

COURSE
Minor Revision to an Existing Course
Undergraduate Curriculum Routing Form

Revised January 2018

Course (as listed in current catalog)	SOC 300 Social Stratification
Department (as listed in current catalog)	Sociology, Social Work and Criminology; School of Hum and SS
College (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 11-5-19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott (✓) Approved ( ) Disapproved 11-12-19

College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-19-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	SOC 300
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology; School of Hum and SS
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☐	The curriculum proposal form has not been altered (formatting, font, etc.).	☐
☐	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☐
☐	The course title, department, and college names correspond to the current catalog.	☐
☐	Course teaching workload, formula, and semesters taught are specified.	☐
☐	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☐
☐	Responses are complete and applicable for each question.	☐
☐	The entire proposal is saved as one Word document.	☐

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Bernadette Barton Bernadette Barton — 11/5/19

Originator (Sign and Print) — Approval Date

Department Curriculum Committee Chair (Sign and Print) — Approval Date

COURSE
Minor Revision to an Existing Course

Use this outline to report a minor modification of a previously approved course and to equate a *current* course with a new course. Minor revisions include title, prefix, course number, catalog course description, and admission requirements (test scores, pre-requisites, or co-requisites). ***Minor changes do not modify course content or the course formula.*** If the course content or formula is to be modified, use the New Course or Major Revision to Existing Course Form. Terms offered should be consistent with the curriculum map.

I. COURSE

Current Course Name: (as listed in the current catalog)	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Faculty Load**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	SOC	300	Social Stratification	3	3-0-3	spring/fall
Proposed Course Name:	**Course prefix (Example: ENG)**	**Number (Example: 100)**	**Title (Example: Writing I)**	**Faculty Load**	**Formula (Example: 3-0-3)**	**Intended Terms Offered (Example: Fall/Spring)**
	SOC	300	Social Stratification	3	3-0-3	spring/fall

II. EXPLANATION

A. Describe the change and justify what this proposal is requesting; what are you doing and why are you doing it? Content will be listed at the end of the document.

This course is currently equated with GST 397. We are in the process of requesting the GST course number be changed to GST 300. Therefore, we also wish to change the course description for SOC 300 to read that SOC 300 equates with GST 300 rather than GST 397.

B. List all other departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

None

C. Explain the potential impact on the other departments and programs.

None

D. List each of the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

None

III. ADDITIONAL INFORMATION

A. If this is a change that effects the current MSU Undergraduate Catalog content, please provide the copy that is to appear in the next catalog revision.

SOC-300 Social Stratification (3 Credits)
This course explores the nature of social inequality with an in-depth focus on the dimension of social class. Students will examine theories of privilege, oppression and the intersectional nature of inequality. Equates with GST 300.

PROGRAM
Major Revision of Existing Program
Undergraduate Curriculum Routing Form
Revised January 2019

Program: (as listed in current catalog)	Bachelor of Social Work
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology
College: (as listed in current catalog)	Caudill College of Arts, Humanities, and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question E1 or E2 in section IV is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Tony S Moore (✓) Approved ( ) Disapproved 10-22-19
Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.
Departmental Curriculum Committee

D. Murphy (✓) Approved ( ) Disapproved 10.22.19
Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 10/31/2019
College Curriculum Committee (Sign and Print) Date

Eva (✓) Approved ( ) Disapproved 11-13-19
Dean (Sign and Print) Date

( ) Approved ( ) Disapproved
Teacher Ed. Council (if program is a secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19
Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved
Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Bachelor of Social Work
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology
College: (as listed in current catalog)	Caudill College of Arts, Humanities, and Social Sciences

Helpful Information:

1. Important Definitions Used in the Curriculum Process
   - Area = a program of study comprised of at least 48 hours
   - Major = a program of study comprised of at least 30 hours, accompanied by a minor
   - Minor = a set of discipline-specific courses of at least 21 hours
   - Certificate = a series of courses related to a specific topic or skill with a prescribed number of hours. For additional information contact the Office of Academic Programs at 783-2003 or email undergraduate@moreheadstate.edu.
   - Core = a set of required courses taken by all students in a specific Area or Major
   - Track = a subset of courses within an area or major designed to develop expertise in a particular topic at the undergraduate level
   - Equated courses vs. cross-listed courses = equated courses are courses of identical content that have different prefixes (and are approved through the undergraduate curriculum process), whereas cross-listed courses have the same instructor and are offered at the same time/location.
   - Pre-requisite = course(s) that a student must successfully complete prior to registering for a more advanced course.
   - Co-requisite = course(s) that a student must take concurrently with another course.
2. An Associate's Degree normally requires at least 60 semester hours including 15 hours of prescribed general education credit.
3. A baccalaureate degree program at the undergraduate level is either an Area or a Major.
4. A program's total credit hours include program core (i.e., courses taken by all students in the program), program supplemental courses (other required hours), and program specific electives. No general education courses or free elective courses count toward total program hours.
5. Curriculum should be designed so that the program's total credit hours plus general education hours and free electives add up to 120 total hours, with 42 of the hours in upper division (i.e., 300- to 400-level) courses.
6. To ensure that students enrolled in a program have common experiences fifty percent (50%) of a program's total credit hours must be made up of core courses.
   Examples:
   a. If an Area is designed with 48 hours, then 24 or more of those hours must be in core courses. The rest of the program hours can be other program requirements that vary from student to student.
   b. If a Major is designed with 30 hours, then 15 or more of those hours must be in core courses. The remainder of the major hours can be other program supplemental courses and program specific electives that vary from student to student. The minor is not considered in calculations for this 50% rule.
   c. If a Major has 30 hours and includes tracks, the core must contain at least the same number (or

higher) of hours as the track. For example, a Major could have 15 hours in core, 9 hours in the track, and 6 hours as program electives.

7. Any proposal with a secondary education component must be routed through the Teacher Education Council.

8. Edits to the proposal may be requested at any level of review. Such edits should be made by the originator of the proposal. The originator also may be asked to address questions (in writing or in person) at any level of review.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If an Information Technology signature is required, it has been obtained.	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Each course pre-fix, number, and title is consistent with the current undergraduate catalog (or with revisions made in supporting curriculum proposals).	☑
☑	Each course has been reviewed for pre-requisites, co-requisites or testing requirements. There are no hidden pre-requisites, co-requisites, or testing requirements.	☑
☑	The program core contains at least 50% of the total program hours (not including general education and free elective hours)	☑
☑	The program core does not contain courses that should be listed in other sections of the proposal (i.e. Other Program Required Hours, Program Electives, etc.).	☑
☑	The program has an adequate number of area/major hours (minimum of 48 for area and minimum 30 for major).	☑
☑	The program has at least 42 upper division hours.	☑
☑	If the program is a major, hours are designated for an accompanying minor.	☑
	If the program has tracks, the total track hours do not exceed the total core hours.	
☑	The program has a maximum of 120 hours. If not, sufficient rationale is included in the proposal.	☑
☑	The curriculum maps each start on a separate page.	☑
☑	The curriculum map contains the official name of the program and track (if applicable).	☑
☑	The curriculum map contains accurate course prefix, number, and name for each course.	☑
☑	The curriculum map lists General Education courses in the first two years.	☑

☑	If the program has tracks, a separate curriculum map is included for each track.	☐
☑	The curriculum map contains EXACTLY the same courses and the same number of credit-hours as the proposal.	☐
☑	The curriculum map does not contain hidden pre-requisites or co-requisites.	☐
☑	The curriculum map codes are accurate.	☑
☑	If the program has tracks, a separate curriculum map is included for each track.	☑
☑	The total credit hours for each semester are acceptable (full-time, not overload, etc.).	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

M. Kennedy D. Murphy Dr. Monica Himes 10.22.19

Originator (Sign and Print) Approval Date

Constance Hardesty 10-22-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

PROGRAM
Major Revision of Existing Program

The outline below is to be used for program revisions. Each revised or new course included in this program requires a separate "New Course or Major Revision to Existing Course" proposal. *Note: an amended curriculum map must be attached to each "Major Revision of Existing Program" proposal.*

I. EXISTING PROGRAM REVISION

State the current title of the Program (as listed in the current catalog)

Bachelor of Social Work

List the degree (e.g. Bachelor of Science) and major or area (e.g. Math Major, Biology Area); as listed in the current catalog. Include tracks if applicable (e.g. Bachelor of Arts, Philosophy Major, Religious Studies Track).

Bachelor of Social Work

State the proposed revised title of the Program (if applicable)

If the degree (e.g. Bachelor of Science) and/or major or area (e.g. Math Major, Biology Area) names are changing, please list them below. Include tracks if applicable.

CIP Code - ***Contact your department chair to verify the correct CIP Code information.***

44.0701

II. NEED AND JUSTIFICATON

A. Describe the changes and justify what this proposal is requesting; what are you doing and why are you doing it?

The proposed change is that all students in the social work program will be required to take a 3-credit hour course related to substance abuse, as part of their completion of the bachelor of social work. Although there are currently elective courses in substance abuse offered within the social work program, many students do not take them. However, substance abuse and the accompanying issues related to addiction (mental health issues, child abuse/neglect, homelessness, relationship issues, domestic violence, criminal activity) are far-reaching and can be seen in nearly every social service agency and setting. Therefore, even students who do not plan to work in the area of substance abuse treatment still need to have a basic knowledge of this critical social issue. Social workers in all settings need to have a knowledge of the trends in substance abuse, the physiological basis of addiction, the intervention and assessment process, and current treatment options. Requiring this course within the bachelor of social work program will help our students have a broader knowledge of this important topic and will enable them to serve their clients from a more holistic and competent perspective.

B. Program *coherence* refers to 1) appropriate sequencing of courses, not a mere bundling of credits, so that 2) student learning is progressively more advanced in terms of assignments and scholarship required and 3) demonstrates progressive advancement in a field of study that allows students to integrate knowledge and grow in critical skills. The expectation that a program embodies a coherent course of study applies regardless of the mode of delivery. Describe any impacts to coherence that the proposed revision to the program may have.

There are no expected impacts to the coherence of the social work program based on this proposed change. Students would be required to take the course prior to graduation, but would be free to take it any time in their sophomore, junior, or senior year, as it would not have any pre-requisites.

C. Have the admission requirements changed? If so, how?

No

D. If a similar program at MSU or in Kentucky exists, provide justification for the duplication.

N/A

III. PURPOSE, GOALS, AND OBJECTIVES

A. What are the goals and objectives of this proposal? How do the proposed changes impact the program's alignment with the program's mission and goals, and/or the University's mission and goals?

The Bachelor of Social Work (BSW) Program is fully accredited by the Council on Social Work Education and prepares students as generalist practitioners for professional social work practice with individuals, families, groups, organizations and communities. In line with CSWE expectations, the social work program uses competencies to guide student development in knowledge, values and skills of generalist social work practice. The following are the program's competencies, and the competencies that will be covered in this course are delineated with the corresponding assignment that will help achieve these goals.

Students will:

1) Demonstrate ethical and professional behavior. (Recovery Group Project Paper and Empathy Building Project Paper).
2) Engage diversity and difference in practice. (Video Reflection Assignments, Recovery Group Project Paper, Empathy Building Project Paper)
3. Advance human rights and social, economic and environmental justice.
4. Engage in practice-informed research and research-informed practice.
5. Engage in policy practice.
6. Engage with individuals, families, groups, organizations and communities. (Reading Quizzes, Empathy Building Project Paper)
7. Assess individuals, families, groups, organizations and communities. (Reading Quizzes, Empathy Building Project Paper)
8. Intervene with individuals, families, groups, organizations and communities. (Reading Quizzes, MAT Compare and Contrast, Empathy Building Project Paper)
9. Evaluate practice with individuals, families, groups, organizations and communities.

B. State the revised program outcomes or competencies to be achieved by students.

The social program competencies will remain the same (as per CSWE accreditation). They are as follows:
Students will:

1. Demonstrate ethical and professional behavior.
2. Engage diversity and difference in practice.
3. Advance human rights and social, economic and environmental justice.
4. Engage in practice-informed research and research-informed practice.
5. Engage in policy practice.
6. Engage with individuals, families, groups, organizations and communities.
7. Assess individuals, families, groups, organizations and communities.
8. Intervene with individuals, families, groups, organizations and communities.
9. Evaluate practice with individuals, families, groups, organizations and communities.

C. How do the specific goals and objectives relate to the mission statement of the University?

By educating all social work majors about the epidemic of addiction and it's impact on this region, the social work program will be in alignment with the mission statement of the university.

As a community of lifelong learners, we will:

- Educate students for success in a global environment (substance abuse is such a prevalent issue within this region and across the country, it is imperative that social work graduates have the knowledge and skills provided in this course);
- Engage in scholarship;
- Promote diversity of people and ideas (Because of the far reach of this disease, many new social workers have been personally impacted by addiction within their families and communities. This course aims to arm them with facts and evidence based practices, broaded their persepctive, increase their empathy for those with substance use disorders, and decrease the stigma associated with addiction).
- Foster innovation, collaboration and creative thinking; and
- Serve our communities to improve the quality of life (By offering this course in the social work program, MSU will graduate social workers who understand the disease of addiction, know how to intervene with persons with substance use disoder, know the community reosurces available, and become part of the solution within the community).

D. List the methods of program assessment to be used other than course grades to ensure that the desired outcomes or competencies are attained by students. Indicate the frequency of assessment and how results will be made available to program faculty.

CSWE benchmarks are collected each semester and that data is compiled by Dr. Lisa Shannon, who serves unofficially as the program's assessment coordinator. This data is shared with faculty at faculty meetings, and is also made avialable on our team site, and on the MSU social work webpage at https://www.moreheadstate.edu/Caudill-College-of-Arts,-Humanities-and-Social-Sci/Sociology,-Social-Work-and-Criminology/Academic-Programs/Social-Work/CSWE-Accreditation

Additionally, WEAVE data is collected every semester and reported to the University assessment office.

E. List discipline-specific standards for accreditation in addition to Southern Association of Colleges and Schools (SACS) accreditation standards. If applicable, attach current statement of requirements.

In addtion to the SACS standards, the BSW program is an accredited program from the Council on Social Work Education (CSWE) and has nine core educational competencies that must be demonstrated. They are:

1) Demonstrate Ethical and Professional Behavior
2) Engage Diversity and Difference in Practice
3) Advance Human rights and Social, Enconomic, and Environmental Justice
4) Engage in Practice-Informed Research and Research-Informed Practice
5) Engage in Policy Practice
6) Engage with Individuals, Families, Groups, Organizations, and Communities
7) Assess Individuals, Families, Groups, Organizations, and Communities
8) Intervene with Individuals, Families, Groups, Organizations, and Communities
9) Evaluate Practice with Individuals, Families, Groups, Organizations, and Communities

Current statement of the CSWE Educational Policy and Accreditation Standards is attached.

IV. IMPACT

A. How will the program changes affect transfer students?

This change could impact transfer students because some students who transfer to MSU from a KCTCS school have already taken their two required social work electives, and this proposed change would mean that they can now only transfer in one social work elective, instead of two (as the new addictions course would take the place of the second social work elective).

B. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

a. offers required courses for this program
b. offers elective courses for this program
c. offers similar courses in their program
d. has an equated course
e. has courses in this proposal listed as a co-requisite or pre-requisite
f. shares staff and/or resources.

Sociology and Criminology

C. Explain the potential impact on the other departments and programs.

Only programs within the Department of Sociology, Social Work and Criminology may be impacted. Currently, Social Work students are required to complete six hours of social work electives, many of which are equated and crosslisted with Criminology and Sociology courses. This proposal reduces the required number of social work elective courses to three, thus possibly impacting enrollment in a few sociology and criminology courses.

D. List the individuals in the other departments and programs notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

NA

E. Does this program revision require new technology? Please note that Information Technology (GH 110) should be notified when the program proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** ☒ **No** **(If yes, a representative from Information Technology must sign the signature sheet.)**

If yes, please list:

1. the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server based license for the software. (IT does not install individual packages in labs, only server based versions).

2. the type of hardware to be utilized.

No additional costs associated with the proposed revisions to the program.

V. PERSONNEL

A. List name(s), qualifications including highest earned degree, and academic rank(s) of departmental faculty who will teach courses in this program.

There are several qualified faculty members within the social work department who could teach this new course, including:
Monica Himes, PhD, LCSW, CADC - Assistant Professor
Ashley Spencer, LCSW, LCADC - Facilitator / Instructor
Paul Susan, MSW - Instructor
Angie Blankenship, CSW - Instructor

B. Identify external or adjunct faculty, if appropriate.

Not applicable at this time

C. List any additional support personnel (clerical, laboratory assistants, and technicians) needed for implementation.

Not applicable

D. List additional faculty including academic rank and qualifications, who must be employed during the next four years if this is implemented.

Not applicable

VI. ADDITIONAL INFORMATION

A. Identify the enrollment and number of graduates from this program for the past four years

Enrollment:
2015-2016: 332
2016-207: 283
2017-2018: 250
2018-2019: 239

Graduates:
2015-2016: 104
2016-2017: 90
2017-2018: 89
2018-2019: 79

B. List anticipated enrollment and number of graduates from this program for the next four years.

Anticipated graduates:
2019-2020: 80
2020-2021: 85
2021-2022: 85
2022-2023: 90

C. Explain any additional or remodeled facilities that will be required.

Not applicable

D. List any additional equipment required.

No additional equipment required. The course will be taught online via Blackboard.

E. Provide the estimated additional cost required to support this program for the next four years. Identify source of new funds (special legislative request, system reallocation, etc.).

If the social work program is fully staffed and all teaching lines are filled, then this proposed change will not cause an additional cost to the university.

VII. PROPOSED PROGRAM REQUIREMENTS

Please use the following template to list all Program courses. To create additional lines, tab while cursor is in the last "Course Hours" field.

Example of different types of entries. Not all programs, minors or certificates will have each type of entry.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
MSU	300	Name of course	3
MSU	400	Name of variable hour course	1-3
Variable		Free Electives	9

General Education

If the Program requires specific general education courses list them here. These courses should NOT have hours listed again in the Program requirements. (e.g. exchange courses, capstone, etc.) Remaining hours should be listed with "variable" as course prefix and "General Education" as course name with the total remaining general education hours in course hours.

Course Prefix	**Number (Example:**	**Course Name**	**Course Hours**

(Example: ENG)	**100)**		

Total General Education Hours	36

Program Core Hours

Program Core courses must be taken by all students in the program. This section cannot contain options such as "MSU 111 or MSU 112" or "choose 3 hours from the following list". Any core Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
SWK	210	Orientation to Social Work	4
SWK	230	Social Welfare History & Ethics	3
SWK	320	Human Behavior in the Social Environment I	3
SWK	321	Human Behavior in the Social Environment II	3
SWK	324	Social Work Research Methods	3
SWK	325	Social Work Generalist Perspective	3
SWK	326	Generalist Practice Lab	3
SWK	424	Social Work Micro Practice	3
SWK	426	Social Work Mezzo Skills	3
SWK	430	Social Policy and Planning	3
SWK	451	Quantitative Data Analysis	3
SWK	497	Practicum in Social Work	8
SWK	498	Social Work Macro Practice	3

Total Program Core Hours (This total should be at least 50% or more of the Total Program Hours; not including general education hours and free elective hours).	45

Other Program Required Hours

Other Program Required Hours are required program courses with the option of choosing between two specific courses (i.e. "MSU 111 or MSU 112"). Track hours should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
SOC	374	Race & Ethnicity	3
SWK	345	Law & Social Work	3
SWK SWK	394 **OR** 470	Intro to Addictions OR Intro to Substance Abuse Counseling	3

Total Other Program Required Hours	9

Program Electives

Program Electives are a list of required program-related courses from which a student chooses a specific number of hours. (e.g. "choose 3 hours from the following list"). Track electives should be listed in the Track section.

Course Prefix (Example: ENG)	Number (Example: 100)	Course Name	Course Hours
SWK		Social Work Elective	3

Total Program Elective Hours	3

IF YOUR PROGRAM DOES NOT HAVE TRACKS, PLEASE PROCEED TO THE FREE ELECTIVE SECTION BELOW.

***Please note: If you need more than two tracks, please contact *undergraduate@moreheadstate.edu* so that the forms can be revised to fit your needs.**

Program Track Name:			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**

Total Track Hours	

Program Track Name:			
Please list all Track Requirements			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**

Total Track Hours	

Free Electives:			
Free General Electives are any course hours still necessary to meet the 120 hour degree requirement after all program requirements are met.			
Course Prefix (Example: ENG)	**Number (Example: 100)**	**Course Name**	**Course Hours**

Total Free Elective Hours	27

TOTAL DEGREE HOURS (Total degree hours should equal 120 or contain a rationale as to why it cannot).	120
Rationale as to why program exceeds 120 hours (if applicable):	
If there is a change to the current catalog language for program competencies, admission criteria, standardized testing requirements, etc., please list the NEW catalog language below. Do not list the old catalog language. Do not list the program courses again.	

Curriculum Map – Bachelor of Social Work (Main Campus)

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

FYS – First Year Seminar
COMS 108 – Fund. Of Speech Communication
MATH 131, 135, 152, 174 or 175 - CORE Math
ENG 100 – Core Writing I
ENG 200 – Core Writing II
Capstone

One 3 credit hour course from each of the following categories

HUM I
HUM II
SBS I
SBS II
NSC I
NSC II

The approved course list may be accessed through the current MSU Undergraduate Catalog.

FIRST YEAR COURSE SCHEDULE							
☐	Fall Semester	Code	Credits	☐	Spring Semester	Code	Credits
	FYS 101 – First Year Seminar	G	3		ENG 200 – Writing II	G	3
	ENG 100 – Writing I	G	3		MATH 123, 131, 135, 152, 174, or 175	G	3
	COMS 108 – Fundamentals of Speech Communication	G	3		HUM 1 – Humanities	G	3
	NSC1 – Natural Sciences	G	3		SBS2 – Social / Behavioral Sciences	G	3
	SBS1 – Social / Behavioral Sciences	G	3		HUM 2 – Humanities	G	3
	Total Credit Hours		15		**Total Credit Hours**		15

SECOND YEAR COURSE SCHEDULE							
☐	Fall Semester	Code	Credits	☐	Spring Semester	Code	Credits
	NSC2 – Natural Sciences	G	3		SWK 230 – Social Welfare History & Ethics	R	3
	SWK 210 – Orientation to SWK	R	4		SOC 374 – Race & Ethnicity	R	3
	Free Elective	E	3		Free Elective	E	3
	Free Elective	E	3		Free Elective	E	3
	Free Elective	E	3		Free Elective	E	3
	Total Credit Hours		16		**Total Credit Hours**		15

THIRD YEAR COURSE SCHEDULE							
☐	Fall Semester	Code	Credits	☐	Spring Semester	Code	Credits
	SWK 320 – Human Behavior in the Social Environment	R	3		SWK 321 – Human Behavior in the Social Environment II	R	3
	SWK 324 – Social Work Research Methods	R	3		SWK 451 – Quantitative Data Analysis	R	3
	SWK 325 – Social Work Generalist Practice	R	3		SWK 326 – Generalist Practice Lab	R	3
	SWK 345 – Law and Social Work	R	3		SWK Elective	R	3
	SWK 394 Intro to Addictions OR SWK 470 Intro to Substance Abuse Counseling	R	3		Free Elective	E	3
	Total Credit Hours		15		**Total Credit Hours**		15

FOURTH YEAR COURSE SCHEDULE							
☐	Fall Semester	Code	Credits	☐	Spring Semester	Code	Credits
	SWK 424 – Social Work Micro Practice	R	3		SWK 497 – Practicum in Social Work	R	8
	SWK 426 – Social Work Mezzo Skills	R	3		SWK 498 – Social Work Macro Practice	R	3
	SWK 430 – Social Policy and Planning	R	3		SWK 499C – Senior Seminar	R	3
	Free Elective	E	3				
	Free Elective	E	3				
	Total Credit Hours		15		**Total Credit Hours**		14

(E) Elective
(P) Pre-requisite
(U) Upper Division Course 300-400 level (you must have 42 hours)
(G) General Education Course
(R) Required Course

Curriculum Map Social Work (BSW) - Prestonsburg Campus

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college-level courses.

FIRST YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	KCTCS				KCTCS		
	Total Credit Hours		15		Total Credit Hours		15

SECOND YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	KCTCS SWK 124 (or HMS 101) & SWK 222 (or HMS 102) are required for admission		15		SOC 374 Race & Ethnicity *** Apply for admission to the Social Work Program this semester Complete KCTCS via Concurrent Enrollment Agreement (must either complete 60-67 hours at KCTCS or 60 hours at KCTCS and 60 hrs at MSU)	R	3
	Total Credit Hours		15		Total Credit Hours		3 MSU

***__**Requirements to apply SPRING semester to the Social Work Program**__: Completed or completing SWK 124 (or HMS 101) & SWK 222 (HMS 102) and have at least a "C" grade; completed 60 hours towards your degree and completed ALL general education courses by the end of the semester; and have an overall GPA of 2.5.

THIRD YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	SWK 320 Human Behavior in the Social Environment – Conception to Young Adulthood	R	3		SWK 321 Human Behavior in the Social Environment – Middle Adulthood to Death	R	3
	SWK 324 Social Work Research	R	3		SWK 451 Quantitative Data Analysis	R	3
	SWK 325 Social Work Generalist Perspective	R	3		SWK 326 Generalist Practice Lab (120 hours of field experience)	R	3
	SWK 345 Law and Social Work	R	3		SWK Elective	R	3
	SWK 394 Intro to Addictions OR SWK 470 Intro to Substance Abuse Counseling	R	3		Free elective	E	3
	Total Credit Hours		15		Total Credit Hours		15

FOURTH YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	SWK 424 Social Work Micro Practice	R	3		SWK 497 Practicum in Social Work (400 hours of field experience)	R	8
	SWK 426 Social Work Mezzo Skills	R	3		SWK 498 Social Work Macro Skills	R	3
	SWK 430 Social Policy and Planning	R	3		SWK 499C Senior Seminar	R/G	3
	Free Elective	E	3				
	Free Elective	E	3				
	Total Credit Hours		15		Total Credit Hours		14

Codes: (P) Pre-Requisite Course(s) must be successfully passed to be eligible to enroll in this course.(U) Upper Division Course 300-400 level (you must have 42 hours)(R) Required Course (E) Elective, (S) Supplemental, (P) Pre-requisite, (G) General Education Course.

Curriculum Map Social Work (BSW) - Mt. Sterling Campus

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree as outlined. This curriculum map assumes that you have not transferred in any previously completed college level courses.

FIRST YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	FYS 101-First Year Seminar	G	3		ENG 200 - Writing II	G	3
	ENG 100 - Writing I	G	3		MATH 123, 131,135,152,174 or 175	G	3
	COMS 108 - Fundamentals of Speech Comm.	G	3		HUM 1 – Humanities	G	3
	NSC 1 - Natural Sciences	G	3		SBS 2 – Social/Behavior Sciences	G	3
	SBS 1 - Social/Behavioral Sciences	G	3		HUM 2 – Humanities	G	3
	Total Credit Hours		**15**		Total Credit Hours		**15**

SECOND YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	Free Elective	E	3		Free Elective	E	3
	NSC 2 - Natural Sciences -	G	3		Free Elective	E	3
	Free Elective	E	3		Free Elective	E	3
	Free Elective	E	3		Free Elective	E	3
	Free Elective	E	3				
	Total Credit Hours		**15**		**Total Credit Hours**		**12**

THIRD YEAR COURSE SCHEDULE							
	Fall Semester *** APPLY to SWK	Code	Credits		Spring Semester	Code	Credits
	SOC 374 Race & Ethnicity	R	3		SWK 320 Human Behavior in the Social Environment – Conception to Young Adulthood	R	3
	SWK 210 Orientation to SWK (30 hours of field experience)	R	4		SWK 324Social Work Research	R	3
	SWK 230- Social Welfare History & Ethics	R	3		SWK 325 Social Work Generalist Perspective	R	3
	SWK 394 Intro to Addictions OR SWK 470 Intro to Substance Abuse Counseling	R	3		SWK 345 Law and Social Work	R	3
	Total Credit Hours		**13**		Total Credit Hours		**12**

FOURTH YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	SWK 321 Human Behavior in the Social Environment – Middle Adulthood to Death	R	3		SWK 430 Social Policy and Planning	R	3
	SWK 451 Quantitative Data Analysis	R	3		SWK 424 Social Work Micro Practice	R	3
	SWK 326 Generalist Practice Lab (120 hours of field experience)	R	3		SWK 426 Social Work Mezzo Skills	R	3
	Free Elective	E	3		SWK Elective	R	3
	Total Credit Hours		**12**		Total Credit Hours		**12**

FIFTH YEAR COURSE SCHEDULE				
	Fall Semester	Code	Credits	***Requirements to apply FALL semester to the Social Work Program: Completed or completing SWK 210 & SWK 230 with at least a "C" grade; 60 credit hours towards your degree and ALL general education courses completed by the end of the semester; and have an overall GPA of 2.5.
	SWK 498 Social Work Macro Practice	R	3	
	SWK 499C Capstone/Gen. Ed & SWK Major	R/G	3	
	SWK 497 Practicum in Social Work (400 hours of field experience)	R	8	
	Total Credit Hours		**14**	

Codes: (P) Pre-Requisite Course(s) must be successfully passed to be eligible to enroll in this course. (U) Upper Division Course 300-400 level (you must have 42 hours); (R) Required Course, (E) Elective, (S) Supplemental, (P) Pre-requisite, (G) General Education Course.

Curriculum Map Social Work (BSW) - Ashland Campus

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college-level courses.

FIRST YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	KCTCS	G	15		KCTCS	G	15
	Total Credit Hours		15		Total Credit Hours		15

SECOND YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	KCTCS Complete SW 124	G	13		KCTCS Complete SW 222	G	15
	Total Credit Hours		13		Total Credit Hours		15

THIRD YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	SOC 374 Race & Ethnicity	R	3		SWK 320 Human Behavior in the Social Environment – Conception to Young Adulthood	R	3
	SWK 394 Intro to Addictions OR SWK 470 Intro to Substance Abuse Counseling	R	3		SWK 324 Social Work Research	R	3
	Complete KCTCS course work		6		SWK 325 Social Work Generalist Perspective	R	3
	APPLY TO THE SOCIAL WORK PROGRAM* **				SWK 345 Law and Social Work	R	3
	Concurrent Enrollment						
	Total Credit Hours		12		Total Credit Hours		12

FOURTH YEAR COURSE SCHEDULE							
	Fall Semester	Code	Credits		Spring Semester	Code	Credits
	SWK 321 Human Behavior in the Social Environment – Middle Adulthood to Death	R	3		SWK 430 Social Policy and Planning	R	3
	SWK 451 Quantitative Data Analysis	R	3		SWK 424 Social Work Micro Practice	R	3
	SWK 326 Generalist Practice Lab (120 hours of field experience)	R	3		SWK 426 Social Work Mezzo Skills	R	3
	Free Elective	E	3		SWK Elective	R	3
	Total Credit Hours		12		Total Credit Hours		12

FIFTH YEAR COURSE SCHEDULE				
	Fall Semester	Code	Credits	
	SWK 498 Social Work Macro Practice	R	3	***Requirements to apply FALL semester to the Social Work Program: Completed or completing SW 124 & SW 222 and have at least a "C" grade; completed 60 hours towards your degree and completed ALL general education courses by the end of the semester; and have an overall GPA of 2.5.
	SWK 499C Senior Seminar	R/G	3	
	SWK 497 Practicum in Social Work (400 hours of field experience)	R	8	
	Total Credit Hours		14	

Codes

(P) Pre-Requisite Course(s) must be successfully passed to be eligible to enroll in this course. (U) Upper Division Course 300-400 level (you must have 42 hours); (R) Required Course, (E) Elective, (S) Supplemental, (P) Pre-requisite, (G) General Education Course.

PROGRAM/MINOR/CERTIFICATE

Deletion/Reinstatement for Program or Minor or Certificate
Undergraduate Curriculum Routing Form

January 2018

Program/Minor/Certificate: (as listed in the current catalog)	Spanish Major with Teacher Certification (P-12) BA
Department: (as listed in the current catalog)	Communications, Media and Languages
College: (as listed in the current catalog)	Caudill College of Arts. Humanities and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

Dept's Gary B. Lafleur GARY B. LAFLEUR (✓) Approved ( ) Disapproved 9/24/19
Department Chair or Associate Dean (Sign and Print) Date

Layne Neeper Layne Neeper (✓) Approved ( ) Disapproved 9/25/19
College Curriculum Committee (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 10/14/19
Dean (Print and Sign) Date

John Ernst John Ernst ( ) Approved ( ) Disapproved 10-15-19
Teacher Ed. Council (if program, is a secondary education program) (Sign and Print) Date

Approved 10/16/19

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu ***(the two documents must be exactly the same).***

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/18/19
AVP UESS-CPE Academic Programs Liaison (Sign and Print) Date

Laurie Couch Laurie Couch ( ) Approved ( ) Disapproved 12/18/19
Undergraduate Curriculum Committee (Sign and Print) Date

( ) Approved ( ) Disapproved 12/18/19
Vice President for Academic Affairs (Sign and Print) Date

For Academic Programs Office Use Only _____Program _____Minor _____Certificate

Official Suspension Date: _____ Date CPE Notified of Suspension: _____

For CPE reporting purposes, a deleted program will be marked as suspended for a minimum of 2 years and a maximum of 5 years to allow for the teach-out plan.

Date AVP UESS notified SAC's Liaison: 12/18/19 SAC's Response Date: _____

Date AVP UESS notified of SAC's Response: _____ SACS Response: ☐ Approved ☐ Denied ☐ Revision Required

Last Catalog Date: _____ Date CPE Notified of Deletion: _____ Program/Minor/Certificate Final Deletion Date: _____

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Program: (as listed in current catalog)	Spanish Major with Teacher Certification (P-12)
Department: (as listed in current catalog)	Communications, Media and Languages
College: (as listed in current catalog)	Caudill College of Arts, Humanities and Social Sciences

Helpful Information:

1. Any proposal with a secondary education component must be routed through the Teacher Education Council.
2. Edits to the proposal may be requested at any level of review. The originator of the proposal should make such edits. The originator also may be asked to address questions (in writing or in person) at any level of review.
3. Students must be admitted to the Program until the proposal has been approved.
4. The program will remain in the catalog until the fall after the proposal is approved.

CHECKLIST

The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		Department Curriculum Committee Chair
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The title, department, and college names correspond to the current catalog.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed.	☑
☑	Responses are complete and applicable for each question.	☑
☑	Students have ample time to finish all the required and elective courses in the teach-out plan.	☑
☑	The teach-out plan is inserted into the proposal.	☑
☑	The sample student notification letter is inserted into the proposal.	☑
☑	If this is a collaborative or joint program with another institution, the signed teach-out agreements with the other institution(s) are attached.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

Philip Krumnacich PHILIP KRUMNACH 08/30/19

Originator (Sign and Print) Approval Date

Gary B. LaFleur GARY B. LAFLEUR 9/24/19

Department Curriculum Committee Chair (Sign and Print) Approval Date

PROGRAM/MINOR/CERTIFICATE

Deletion/Reinstatement for Program or Minor or Certificate

This outline is to be followed for **program/minor/certificate** deletion or reinstatement.

☒ ☐ ☐	**Program Minor Certificate**	**Title:** **(as listed in the current catalog)**	Spanish Major with Teacher Certification (P-12)
☒ ☐	**Deletion –** Program/Minor/Certificate will be removed and cannot be reinstated. **Reinstatement -** brings back from suspension. Cannot be used if Program/Minor/Certificate has been permanently deleted.		

CIP Code ***Contact your department chair or associate dean to verify the correct CIP code information.***

16.0905

TYPE OF ACTION

I. PROGRAM/MINOR/CERTIFICATE DELETION

*For CPE reporting purposes, a deleted program will be marked as suspended for a minimum of 2 years and a maximum of 5 years to allow for the teach-out plan.

a. Proposed date students are no longer allowed to enroll:	12/15/2019
b. Date all students must have completed the teach-out plan:	12/15/2023
c. Proposed final program/minor/certificate deletion date:	12/15/2023

II. PROGRAM/MINOR/CERTIFICATE REINSTATEMENT

*****Program reinstatement must occur within the suspension period.

a. Official suspension date for the program:	
b. Proposed date for reinstatement	

JUSTIFICATION

A. Why is the Program, Minor, or Certificate being deleted or reinstated?

Because of ongoing staffing shortages, we can no longer offer a program of acceptable quality. We plan instead to make teaching certification in Spanish available as a track in a proposed new program through the College of Education.

B. List all departments and programs that could be impacted by this proposal. For example, any department or program that:

- **a. offers required courses for this program, minor, or certificate**
- **b. offers elective courses for this program**
- **c. offers similar courses in their program**
- **d. has an equated course**
- **e. has courses in this proposal listed as co-requisite or pre-requiste**
- **f. shares staff and/or resources.**

Middle Grades and Secondary Education

C. Explain the potential impact on the other departments and programs.

Some classes required for secondary education programs may have slightly lower enrollments. There should be no other impact.

D. List the individuals in the other departments and programs notified by the proposing department and define the method of contact (e-mail, phone conversation, etc.)

Dr. Tim Simpson (e-mail)

E. What is the impact on students?

The impact should be minimal; students wishing to seek certification in Spanish will be advised to plan to enroll in the MAT program.

F. What is the impact on enrollment?

a. University

b. Department

c. Program

The proposed deletion should have no impact on university or departmental enrollments. We anticipate that students interested in a teaching career in Spanish will declare a Spanish major, and later seek certification through the MAT program.

G. What is the impact on staffing:

The deletion of the Spanish Traching major will improve efficiency; the two classes that were offered in the department primarily for Spanish Teaching, as opposed to Spanish, were always low-enrolled. With the grave shortage of staffing we have been subjected to for several years, this improvement in efficiency is welcome..

H. How will affected faculty and staff be informed of the impending reinstatement/closure?

Faculty who teach Spanish are already aware of the proposed closure; it will not have significant impact on their teaching loads. Dr. Simpson will be asked to apprise faculty in his department of the proposed changes, which will have at most a slight effect on enrollmnet in some classes, such as EDF 207.

TEACH OUT PLAN

A. Will the teach-out plan require students to incur additional expense? ☐ **Yes** ☒ **No**

If yes, please describe the additional expense, list how much additional expense, and identify how the students will be notified of the additional expense.

A. Please insert the teach-out plan.

Currently only three students are listed as having declared this major, and one has stated her intention of changing to a different program.. The other two students will easily be able to take most of the required classes. The exception is SPA 405, which will be offered as a directed study for students who need it.

B. Please insert a sample of the student notification letter.

Dear ____,

I am writing to inform you that the Spanish Major with Teaching Cerification (P-12) will be discontinued. You will have the option of completing the program as it stood when you declared the major, or of changing to a new program which will still allow you to earn certification in Spanish. I will schedule an appointment with you during the new two weeks to go over your program and explain your options. Please be assured that this will not delay your graduation or interfere with your ambition to earn certification in Spanish.

Cordially,

Dr. Philip Krummrich

C. Is this a collaborative or joint program with another institution? ☐ Yes ☒ No

If so, please attach signed copies of the teach-out agreements with the other institution(s).

COURSE
New Course or Major Revision to Existing Course
Undergraduate Curriculum Routing Form

Revised April 2019

This is a ☒ **New Course** ☐ **Revised Course**

Course: (if revision, as listed in current catalog)	SWK 394 Introduction to Addictions
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology
College: (as listed in current catalog)	Caudill College of Arts, Humanities, and Social Sciences

The proposal form language and formatting cannot be altered in any way. If the form has been altered, it will be returned to the initiator for revision.

Please note: it is the initiator's responsibility to track a proposal through the approval process.

Signatures *(Signatures must be handwritten; electronic signatures are not accepted.)*

If question F1 or F2 in section V is answered yes, then you (the initiator) must have a representative from Information Technology (GH 201) sign the signature sheet before it is submitted to the department curriculum committee.

Corey S. Moore (✓) Approved ( ) Disapproved 10-22-19

Information Technology Resources Are Available (Sign and Print) Date

The Departmental Curriculum Committee Chair will review and complete the checklist on the next page to indicate their approval.

Departmental Curriculum Committee

(✓) Approved ( ) Disapproved 10.22.19

Department Chair or Associate Dean (Sign and Print) Date

Alana Scott Alana Scott (✓) Approved ( ) Disapproved 10/31/19

College Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 11-13-19

Dean (Sign and Print) Date

( ) Approved ( ) Disapproved

Teacher Ed. Council (if the course is required in any secondary education program) (Sign and Print) Date

Once the proposal has been approved through the above levels, the initiator will route the FINAL paper document to Howell McDowell 204 and submit the FINAL electronic WORD document to undergraduate@moreheadstate.edu (the two documents must be exactly the same).

Laurie Couch Laurie Couch (✓) Approved ( ) Disapproved 12/16/19

Undergraduate Curriculum Committee (Sign and Print) Date

(✓) Approved ( ) Disapproved 12-16-19

Vice President for Academic Affairs (Sign and Print) Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: (as listed in current catalog)	SWK 394 Introduction to Addictions
Department: (as listed in current catalog)	Sociology, Social Work, and Criminology
College: (as listed in current catalog)	Caudill College of Arts, Humanities, and Social Sciences

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The initiator will review the final document and complete the checkboxes on the left side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the Department Curriculum Committee Chair for their review.

The Department Curriculum Committee Chair will review the document and complete the checkboxes on the right side of the page, sign and date the Cover Sheet, and submit the paper hard copy of the complete proposal to the next level.

Initiator		**Department Curriculum Committee Chair**
☑	The curriculum proposal form has not been altered (formatting, font, etc.).	☑
☐	If an Information Technology signature is required, it has been obtained.	☑
☑	If a Teacher Education Council signature is required, the next approval level will be notified so that it can be obtained.	☑
☑	Grammar, spelling, punctuation, sentence structure, etc. is accurate.	☑
☑	The course title, department, and college names correspond to the current catalog.	☑
☑	Course teaching workload, formula, and semesters taught are specified.	☑
☑	The course description EXACTLY matches the course description stated in the syllabus.	☑
☑	The impacted departments, programs, the individuals notified, and the method of notification are listed. Impact is defined as any program or department that requires the course, offers the course as an elective, offers a similar course, has an equated course, has the course listed as a co-requisite or pre-requisite, shares staff and/or resources.	☑
☑	Responses are complete and applicable for each question.	☑
☐	If the course requires the use of live animals, the IACUC form is attached.	☑
☑	The syllabus starts on a separate page.	☑
☑	The syllabus contains a heading to reflect "Morehead State University" as well as college, school, and/or department.	☑
☑	The syllabus contains the course title and course number (exactly as listed in the proposal).	☑
☑	The syllabus contains the academic term with date.	☑
☑	The syllabus contains the instructor's name.	☑
☑	The syllabus contains the office location.	☑

☑	The syllabus contains the instructor's office phone number and office hours schedule.	☑
☑	The syllabus contains the email address and URL for the instructor's personal web site, if applicable.	☑
☑	The syllabus contains the revised course description and it exactly matches the course description on the proposal. If there is no revision to the course description, it exactly matches the course description in the current catalog.	☑
☑	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☑
☑	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☑
☑	The syllabus contains a week by week or day by day course calendar with specific content, assignments and/or exams highlighted.	☑
☑	The syllabus contains a grading description and distribution (please be very specific).	☑
☑	The syllabus contains a course attendance policy (please be very specific and ensure compliance with UAR 131.04).	☑
☑	The syllabus contains the following Campus Safety Statement: **Campus Safety Statement** Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: http://www.moreheadstate.edu/emergency/	☑
☑	The syllabus contains the following academic honesty policy: **Academic honesty:** All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty includes doing one's own work, giving credit for the work of others, and using resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.	☑
☑	The syllabus contains the following policy for accommodating students with disabilities: **Americans with Disabilities Act (ADA)** Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188 or e.day@moreheadstate.edu or visit their website at www.moreheadstate.edu/disability.	☑
☑	The entire proposal is saved as one Word document.	☑

My signature verifies that I have reviewed the proposal and it is ready to go to the next level.

M. Himes by D. Murphy DR. Monica Himes 10·22·19

Originator (Sign and Print) Approval Date

C. Hardesty Constance Hardesty 10-22-19

Department Curriculum Committee Chair (Sign and Print) Approval Date

COVER SHEET

This sheet (including the Checklist) MUST accompany the paper hard copy of the proposal that is routed through the signature process.

Course: **(as listed in current catalog)**	SWK 394 Introduction to Addictions
Department: **(as listed in current catalog)**	Sociology, Social Work, and Criminology
College: **(as listed in current catalog)**	Caudill College of Arts, Humanities, and Social Sciences

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☐	The syllabus contains the instructor's office phone number and office hours schedule.	☐
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☐	The syllabus contains the intended student learning outcomes related to program objectives as specified in the catalog.	☐
☐	The syllabus contains the methods by which the achievement of each student learning outcome listed on the syllabus will be measured. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; or 2. Students will complete an exam; objective test.	☐
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Originator (Sign and Print) Approval Date

Department Curriculum Committee Chair (Sign and Print) Approval Date

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Originator (Sign and Print) Approval Date

Department Curriculum Committee Chair (Sign and Print) Approval Date

COURSE

New Course or Major Revision to Existing Course

This outline is to be used when a new course is proposed or when a major change is proposed to an existing course. If you are preparing a *new* experimental course/workshop proposal, please use the New Experimental Course/Workshop form. This outline is not to be used for General Education Courses. Refer to the General Education web site.

I. COURSE INFORMATION

- The course title should only be 30 characters.
- The following are definitions of terms related to courses:
  - **Petition required** – requires permission from the Department Chair to enroll in a section of the course.
  - **Equated** – two different courses with the same content at the same level with different prefixes.
  - **Restricted** – program admission is required and/or must have Department Chair approval.
  - **Formula** – (3-0-3) = instruction hours – lab hours – credit hours

This is a ☒ **New Course** ☐ **Revised Course**

	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
Course Name (as listed in the current catalog)						
Proposed Course Name	Course prefix (Example: ENG)	Number (Example: 100)	Title (Example: Writing I)	Formula (Example: 3-0-3)	Faculty Load (Contact your Department Chair or Dean's Office for assistance)	Intended Terms Offered (Example: Fall/Spring)
	SWK	394	Introduction to Addictions	3-0-3		Fall and Spring

Approved major or program(s) in which the course will be offered. (as listed in the current catalog)
Bachelor of Social Work

This is a ☒ **required course. This is an** ☐ **elective course.**

Course Description	Course description ***exactly as it will appear in the catalog and as it appears on the sample syllabus***. Include pre-requisites/co-requisites, petition requirements, course equations, restrictions and term(s) offered. Example: XYZ 288. Guidelines for a New Course. (3-0-3) Fall and Spring; petition required. A study of the impact of technology on individuals, society, and the environment. Equated with ABC 288.

SWK 394: Introduction to Addictions. (3-0-3). Fall and Spring. Prequisite: Admission into the Social Work program. This course introduces students to the topic of addictions and chemical dependency. This course is designed to challenge and develop the student's knowledge of, and thinking about substance use and misuse in contemporary society. It provides clinical and scientific knowledge about the nature of substance misuse, the physiological aspects of addiction, and the effect of substance misuse on individuals, families, communities, health, and development. It also introduces the student to current evidence based treatment and prevention approaches. The course helps students identify and address substance abuse issues across population groups and consider how these issues impact a wide variety of social service, healthcare, and criminal justice systems.

II. PURPOSE, GOALS AND OBJECTIVES

A. What are the goals and objectives of the proposal? Explain why you are proposing a new course or why and how you are revising a current course.

This new course is being proposed to coincide with a proposal that all social work students be required to complete a course in addictions prior to graduation. Although there are five chemical dependency courses already offered (SWK 470,471,472,473,474), those courses are intended and were developed for students who plan to become alcohol and drug counselors and are much more in-depth than most students need. Substance abuse and the accompanying issues related to addiction (mental health issues, child abuse/neglect, homelessness, relationship issues, domestic violence, criminal activity) are far-reaching and can be seen in nearly every social service agency and setting. Therefore, even students who do not plan to work in the area of substance abuse treatment still need to have a basic knowledge of this critical social issue. Social workers in all settings need to have a knowledge of the trends in substance abuse, the physiological basis of addiction, the intervention and assessment process, and current treatment options. Requiring this course within the bachelor of social work program will help our students have a broader knowledge of this important topic and will enable them to serve their clients from a more holistic and competent perspective.

B. Justify the proposed instructional level (100-600) or instructional level change.

This is a 300-level course because students should take it after being formally admitted to the social work program (their junior year). The reading and coursework for this class are appropriate for a 300-level course.

C. List the student learning outcomes for the course.

Students will be able to:

1. Define and compare conflicting theories that explain chemical dependency from the sociological, medical, and behavioral perspectives.
2. Summarize the physical and mental health implications of substance abuse.
3. Describe the impact of substance abuse on the family and identify the characteristics of a family with a substance user.
4. Identify and use basic screening and assessment tools for substance use disorder
5. Compare and contrast current evidence-based treatments for each varying class of substances.
6. Recognize and express how personal values and experiences may influence your thinking about addiction and your treatment of clients with substance use disorders.

D. Describe how those student learning outcomes will be assessed. List each activity and the assessment method for that activity. For example: 1. Students will write a term paper; scored by a rubric; **or**
2. Students will complete an exam; objective test.

1. Students will complete reading quizzes; objective tests.
2. Students will write a paper based on the Empathy Building experience; scored by a rubric
3. Students will attend a local self-help recovery group meeting and write a paper about the experience; scored by a rubric
4. Students will participate in discussion boards; scored by a rubric
5. Students will write reflections on videos they watch in the course; scored by a rubric

E. Define how the course helps students to achieve learning objectives required for the program.

The Bachelor of Social Work (BSW) Program is fully accredited by the Council on Social Work Education and prepares students as generalist practitioners for professional social work practice with individuals, families, groups, organizations and communities. In line with CSWE expectations, the social work program uses competencies to guide student development in knowledge, values and skills of generalist social work practice. The following are the program's competencies, and the competencies that will be covered in this course are delineated with the corresponding assignment that will help achieve these goals.

Students will:

1) Demonstrate ethical and professional behavior. (Recovery Group Project Paper and Empathy Building Project Paper).
2) Engage diversity and difference in practice. (Video Reflection Assignments, Recovery Group Project Paper, Empathy Building Project Paper)
3. Advance human rights and social, economic and environmental justice.
4. Engage in practice-informed research and research-informed practice.
5. Engage in policy practice.
6. Engage with individuals, families, groups, organizations and communities. (Reading Quizzes, Empathy Building Project Paper)
7. Assess individuals, families, groups, organizations and communities. (Reading Quizzes, Empathy Building Project Paper)
8. Intervene with individuals, families, groups, organizations and communities. (Reading Quizzes, MAT Compare and Contrast, Empathy Building Project Paper)
9. Evaluate practice with individuals, families, groups, organizations and communities.

F. Explain how the specific goals and objectives of the course relate to the mission statement of the University.

MSU's mission statement is supported by the goals and objective of this course.

As a community of lifelong learners, we will:

- Educate students for success in a global environment (substance abuse is such a prevalent issue within this region and across the country, it is imperative that social work graduates have the knowledge and skills provided in this course);
- Engage in scholarship;
- Promote diversity of people and ideas (Because of the far reach of this disease, many new social workers have been personally impacted by addiction within their families and communities. This course aims to arm them with facts and evidence based practices, broaded their persepctive, increase their empathy for those with substance use disorders, and decrease the stigma associated with addiction).
- Foster innovation, collaboration and creative thinking; and
- Serve our communities to improve the quality of life (By offering this course in the social work program, MSU will graduate social workers who understand the disease of addiction, know how to intervene with persons with substance use disoder, know the community reosurces available, and become part of the solution within the community).

III. IMPACT

A. List any existing course(s) that will be replaced by the proposed/revised course.

N/A

B. List other courses now offered at MSU that will have duplication or overlap. Explain the degree to which the course duplicates or overlaps and provide justification for the duplication or overlap.

SWK 470 and SWK 471 will have some content overlap with this course. SWK 470 and SWK 471 are part of a series of five courses within the Chemical Dependency Counseling minor and are taken concurrently, followed by SWK 472 and SWK 473, followed by SWK 474. However, SWK 470 and SWK 471 were developed for students who plan to work in the field of substance abuse counseling and the series of classes goes in depth about all types of drugs, all treatment modalities, specific counseling approaches to use with this population, as well as in-depth assessment and intervention strategies. The new course is being developed for students who do not necessarily plan to work in the area of substance abuse treatment and/or have minimal knowledge of addiction. The course will be a broad overview of addictions and the material will overlap some of what is covered in SWK 470/471/472/473/474, but from a broader perspective and with much less detail. For example, in SWK 472, the students spend one week covering each classification of drugs (one week for alcohol, one week for cocaine, etc.), learning in depth about the biological and psychological effects of each drug, the signs and symptoms of use, and the approriate treatment approaches for that drug. In this proposed course, due to time constraints, the students will get a briefer version of this information, focused primarily on the current most abused drugs (alcohol, opioids, meth).

The psychology department also offers two elective courses in their Bachelor of Psychology program that cover addiction, PSY 465 and PSY 471. These courses cover some content that is similar to the proposed course. However, the proposed is developed and will be taught from a social work perspective, which varies significantly from a psychology perspective. Social workers operate from a strengths-based perspective, they view all issues through a person-in-environment approach, and they continually seek solutions for the macro-level systems of oppression and discrimination that are at play in any given situation. It is important that social work students learn this material from a social work perspective from a social work educator in order to maintain the integrity of their BSW degree.

C. List departments and programs that could be impacted by this proposal. For example, any department that:

- **a. requires the course**
- **b. offers the course as an elective**
- **c. offers a similar course**
- **d. has an equated course**
- **e. has the course listed as a co-requisite or pre-requisite**
- **f. shares staff and/or resources**

The social work program is the only known department to be impacted by this proposal.

D. List each of the individuals notified by the proposing department chair and define the method of contact (e-mail, phone conversation, etc.)

IV. PERSONNEL

A. List names, qualifications including the highest earned degree, and academic rank(s), of faculty available to MSU who will teach the course.

There are several qualified faculty members within the social work department who could teach this new course, including:
Monica Himes, PhD, LCSW, CADC - Assistant Professor
Ashley Spencer, LCSW, LCADC - Facilitator / Instructor
Paul Susan, MSW - Instructor
Angie Blankenship, CSW - Instructor

B. Identify external adjunct faculty, if appropriate.

Not applicable at this time

V. ADDITIONAL INFORMATION

A. Desired section size and anticipated enrollment.

40

B. Desired implementation date for the course.

Fall 2020

C. Method of instruction (online, lecture, laboratory, individualized, etc.).

Online

D. Additional facilities and special equipment needs for this course, if any.

N/A

E. Use of library resources

It is recommended that you contact a library liaison prior to completing this section to determine what resources and services are available to support the course.

- **Does the course require library resources to support specific class assignments or supplemental reading?** ☐ **Yes** ☒ **No**
- **Do the library services and resources presently available meet student needs for the course?** ☒ **Yes** ☐ **No**

If not, what library acquisitions are being proposed to meet essential needs?

F. Does this course require new technology?

Please note that Information Technology (GH 110) should be notified when the course proposal is being developed. Early notification will allow IT an opportunity to provide quality information that can be included in the proposal request form.

☐ **Yes** (If yes, you must have a representative from Information Technology review the proposal and sign the signature sheet.)

☒ **No**

If yes, please list:

1. **the software to be used and its estimated cost. If there is intent to utilize the software in a lab, include the estimated cost of the server-based license for the software. (IT does not install individual packages in labs, only server-based versions).**

2. **the type of hardware to be utilized.**

G. Does this course involve the use of live animals? ☐ **Yes** ☒ No

If so, include the approval form from the associated Institutional Animal Care and Use Committee (IACUC).

H. Please include a sample syllabus (must start on new page). *All elements on the syllabus checklist must be included on the sample syllabus* (syllabus checklist attached).

- Proposals for all Teacher Education courses (including content courses that typically have 50% more teacher preparation majors enrolled) are required to go to the Teacher Education Committee as part of the curriculum approval process
- The teacher education syllabi must contain these elements: the theme for MSU's Teacher Education Program; CAEP* themes; any additional EPSB themes; and program appropriate Kentucky Teacher Standards (www.kyepsb.net/teacherprep/standards.asp). Further information and models are provided at http://www.moreheadstate.edu/education/.
- *The College of Education (CoE) is NCATE accredited. NCATE and TEAC have combined to form CAEP, a new national accrediting organization. Educator Preparation Programs, including the CoE at MSU are in the process of transitioning from NCATE to CAEP and as such, we are working to transition to align our programs with CAEP standards and requirements in anticipation of our next accreditation visit in 2018, at which time we will fall fully under CAEP standards and guidelines. For more information on CAEP and the new accreditation process, please see www.caepnet.org.

Morehead State University
Caudill College of Arts, Humanities and Social Sciences
School of Humanities and Social Sciences
Department of Sociology, Social Work, and Criminology
Social Work Program

Course Name:	Introduction to Addictions	Instructor:	Monica Himes, PhD, LCSW
Course Number:	SWK 394-301	**Office:**	332 Rader Hall Morehead, KY
Credit Hours:	3	**Phone:**	606-783-2172
Semester:	Fall 2020	**E-mail:**	m.himes@moreheadstate.edu
Meeting Place:	Online	**Office Hours:**	Tuesdays and Thursdays 12:30p – 1:50p Virtual advising and/or other in-person times available upon request

Course Description:
This course introduces students to the topic of addictions and chemical dependency. This course is designed to challenge and develop the student's knowledge of, and thinking about substance use and misuse in contemporary society. It provides clinical and scientific knowledge about the nature of substance misuse, the physiological aspects of addiction, and the effect of substance misuse on individuals, families, communities, health, and development. It also introduces the student to current evidence based treatment and prevention approaches. The course helps students identify and address substance abuse issues across population groups and consider how these issues impact a wide variety of social service, healthcare, and criminal justice systems.

Course Objectives:

Students will be able to:

1. Define and compare conflicting theories that explain chemical dependency from the sociological, medical, and behavioral perspectives. (Reading Quizzes, Video Reflection Assignments)

2. Summarize the physical and mental health implications of substance abuse. (Reading Quizzes, Video Reflection Assignments)

3. Describe the impact of substance abuse on the family and identify the characteristics of a family with a substance user. (Reading Quizzes, Video Reflection Assignments)

4. Identify and use basic screening and assessment tools for substance use disorder. (Reading Quizzes)

5. Compare and contrast current evidence-based treatments for each varying class of substances. (MAT Compare and Contrast Assignment)

6. Recognize and express how personal values and experiences may influence your thinking about addiction and your treatment of clients with substance use disorders. (Empathy Building Project, Recovery Group Project Paper)

Social Work Competencies

Competency-based education is an outcome performance approach to curriculum design required by the Council on Social Work Education (CSWE). These competencies are comprised practice behaviors which address knowledge, values, and skills. The goal of the outcome approach is to demonstrate the integration and application of the competencies in practice with individuals, families, groups, organizations, and communities in generalist practice. Competencies addressed in this class are in bold:

Competency 1–Demonstrate Ethical and Professional Behavior
Competency 2 –Engage Diversity and Difference in Practice
Competency 3 –Advance Human Rights and Social, Economic, and Environmental Justice
Competency 4 –Engage In Practice-informed Research and Research-informed Practice
Competency 5 –Engage in Policy Practice
Competency 6 –Engage with Individuals, Families, Groups, Organizations, and Communities
Competency 7 –Assess Individuals, Families, Groups, Organizations, and Communities
Competency 8 –Intervene with Individuals, Families, Groups, Organizations, and Communities
Competency 9 –Evaluate Practice with Individuals, Families, Groups, Organizations, and Communities

Competency	Measures	Dimensions
Competency 1: Demonstrate Ethical and Professional Behavior	• Recovery Group Project Paper • **Empathy Building Project Paper**	• Values, C/A Processes • Values, C/A Processes
Competency 2: Engage Diversity and Difference in Practice	• Video Reflection Assignments • Recovery Group Project Paper • **Empathy Building Project Paper**	• Values, C/A Processes • Values, C/A Processes
Competency 6: Engage with Individuals, Families, Groups, Organizations, and Communities	• Reading Quizzes • **Empathy Building Project Paper**	• Knowledge, Skills, C/A Processes
Competency 7: Assess Individuals, Families, Groups, Organizations, and Communities	• Reading Quizzes • **Empathy Building Project Paper**	• Knowledge, Skills, C/A Processes
Competency 8 –Intervene with Individuals, Families, Groups, Organizations, and Communities	• Reading Quizzes • MAT Compare and Contrast Assignment • **Empathy Building Project Paper**	• Knowledge, Skills, C/A Processes

Required Textbooks:

Doweiko, H. (2018). *Concepts of Chemical Dependency (10th ed).* Stamford, Connecticut: Cengage Learning.

Americans with Disabilities Act (ADA)
Students with disabilities are entitled to academic accommodations and services to support their access and safety needs. The Office for Disability Services in 202 Adron Doran University Center (ADUC) coordinates reasonable accommodations for students with documented disabilities. Although a request may be made at any time, services are best applied when they are requested at or before the start of the semester. Please contact Disability Services at 606-783-5188, e.day@moreheadstate.edu, or visit their website at www.moreheadstate.edu/disability for more information. - See more at: http://www.moreheadstate.edu/success/Disability-Services

Campus Safety Statement:
Emergency response information will be discussed in class. Students should familiarize themselves with the nearest exit routes in the event evacuation becomes necessary. You should notify your instructor at the beginning of the semester if you have special needs or will require assistance during an emergency evacuation. Students should familiarize themselves with emergency response protocols at: www.moreheadstate.edu/emergency.

Inclement Weather
As this is an online course, inclement weather should have minimal impact on our learning. However, please be aware that MSU will announce any cancellation of classes due to weather on the web at: www.moreheadstate.edu. Please be attentive to email communication from me, should we have significant weather that might have implications for this course.

Academic Honesty / Plagiarism
All students at Morehead State University are required to abide by accepted standards of academic honesty. Academic honesty oindludes doing one's own work, giving credit for the work of others, and uses resources appropriately. Guidelines for dealing with acts of academic dishonesty can be found in the academic catalog.

Social work students are expected to complete assignments and independent readings, contribute to the development of a positive learning environment, and demonstrate their learning through written assignments, presentations, and class participation. Original work is expected and required. All submitted work must conform to the Social Work Code of Ethics. For information on the Social Work Code of Ethics, please see: Code of Ethics http://www.naswdc.org/pubs/code/code.asp.

The Social Work Code of Ethics states: "Social workers should not participate in, condone, or be associated with dishonesty, fraud, or deception" (4.04 Dishonesty, Fraud, and Deception). Additionally, social work students, "should take responsibility and credit, including authorship credit, only for work they have actually performed and to which they have contributed" and "honestly acknowledge the work of and the contributions made by others" (4.08 Acknowledging Credit).

Please note that Academic Honesty is defined in MSU's The Eagle: Student Handbook – Appendix D as: "doing one's own work, giving credit for the work of others, and using resources appropriately." Violations will result in disciplinary action including, at minimum a failing grade on the assignment and potentially "the removal of the student from the Social Work Program" as stated in the Social Work Handbook - The Social Work Student Policies, Rights and Responsibilities, 5(h).
Plagiarism on any assignment in this course will result at minimum in a failing grade for the assignment and will potentially be reported to the Dean of Students at Morehead State University. *If you are unclear on whether or not you understand plagiarism, please talk with me –I can help!*

Five acts of plagiarism are specifically prohibited:
1) Copying from another student's assignment and representing it as your own work.
2) Collaborating with another student in writing an assignment and representing the assignment as your own

work.
3) Copying words and/or passages directly from books, articles, court cases, course readings, or internet sites without quoting and citing the source and, thereby, representing the words and/or passages as your own.
4) Using ideas and information directly attributable to a specific book, article, court case, or internet site without citing the source and, thereby, representing the ideas as your own.
5) Receiving or sharing quiz answers with other students in the class.

In your papers, you must cite the source of the material that you have borrowed from another person, using American Psychological Association (APA) style guidelines. Cite the source at the end of the last sentence of the passage in which you use the words or ideas of another person. Ex: (Smith, 2011). For quotes, use quotation marks and include the page number of the passage being quoted. Ex: (Jones, 2009, p. 48). You must then have a References page at the end of your paper that that provides the complete reference for every source that you have cited in the text. All citations must also have references and all sources in your reference list must have been cited in the text of your paper. Your failure to properly cite and reference the sources is plagiarism.

Attendance Policy

As this is an online course, you will be working at your own pace. It is expected that you log into the Blackboard shell for this course at least once per week, in order to stay caught up on announcements and assignments.

Assignment Due Dates

Assignments are to be submitted on Blackboard by the due date. Late assignments will be assessed a 10% penalty for each day they are late (including weekends). Assignments can be submitted up to 7 days late with the applicable point reduction, after which the grade is a zero.

Course Evaluation Standards

Discussion Board Assignments (2 discussion boards x 20 points)	40 points
Recovery Group Project	
Empathy Building Project	
Video Reflection Assignments (4 reflections x 10 points)	40 points
Disease Model Video	
Families in Recovery	
Journey to Recovery	
Treatment Options	
Reading Quizzes (10 quizzes x 10 points)	100 points
Recovery Group Project Paper	100 points
Empathy Building Project Paper ***(Signature Assignment)***	100 points
MAT Compare and Contrast	50 points
	Total Points: 430

Grading Scale:

A = 91 – 100%
B = 81 – 90%
C = 71 – 80%
D = 61 – 70%
E = 60% or below

Students must receive a C or better and complete the signature assignment to pass the course (MSU Social Work Program policy).

Course Timeline

Week	Dates	Topic	Required/Recommended Resources*	Assignments
1		Introduction	***Required Reading:*** Course Syllabus and Course Timeline	1. **Submit syllabus contract** 2. **Submit Empathy Building Contract** 3. **Post to "Introduce Yourself" Discussion Board**
2		Nature of Addiction	***Required Reading:*** Doweiko – Chapters 1, 2, & 3 Accompanying PowerPoints for each assigned chapter are provided on Blackboard for your review and/or as a reading guide	**1. Week 2 Reading Quiz**
3		Addiction Models	***Required Reading:*** Doweiko – Chapters 26 & 27 ***Required Viewing:*** Watch Disease Model Lecture (guest speaker)	**1. Video Reflection Activity** **2. Week 3 Reading Quiz**
4		Drugs of Abuse	***Required Reading:*** Doweiko – Chapter 5, 7, 9 & 11 ***Required Viewing:*** Watch Lecture Video – "Drugs of Abuse"	**1. Week 4 Reading Quiz**
5		Physical & Mental Health Implications of Substance Abuse	***Required Reading:*** Doweiko – Chapter 25 & 36 ***Required Viewing:*** Watch Lecture video – "Dual Diagnosis"	**1. Submit Recovery Group Project Paper** 2. **Discussion Board about Recovery Group Project**
6		Across the Life Span	***Required Reading:*** Doweiko – Chapters 17, 20 & 21	**1. Week 6 Reading Quiz**
7		The Family	***Required Reading:*** Doweiko – Chapters 23 & 24 ***Required Viewing:*** Families in Recovery, Parts 1 - 9	**1. Week 7 Reading Quiz** **2. Video Reflection Activity**
8		Cultural Competency / Gender Considerations	***Required Reading:*** Doweiko – Chapters 18 & 19 ***Required Viewing:*** Watch lecture Video – "Cultural / Gender Considerations" Watch Video: "Cross Cultural Issues in Recovery from Addiction"	**1. Discussion Board post about Empathy Building Project**

Week	Dates	Topic	Required/Recommended Resources*	Assignments
9		Assessment & Intervention	***Required Reading:*** Doweiko – Chapters 28 & 29 ***Required Viewing:*** Watch Video – "Journey to Recovery"	**1. Week 9 Reading Quiz** **2. Video Reflection Activity**
10		Substance Abuse Treatment Options	***Required Reading:*** Doweiko – Chapter 30, 31, 32	**1. Submit Empathy Building Project Paper**
11		Substance Abuse Treatment Options (Continued)	***Required Reading:*** Doweiko – Chapter 33 ***Required Viewing:*** Watch lecture Video – "Current Treatment Options"	**1. Week 11 Reading Quiz**
12		Self-Help Support Groups	***Required Reading:*** Doweiko – Chapter 35 ***Required Viewing:*** Watch lecture video – "Self Help / AA"	**1. Week 12 Reading Quiz** **2. MAT Compare and Contrast Due**
13		Relapse & Recovery	***Required Reading:*** Doweiko – Chapter 34 ***Required Viewing:*** Watch Video – "Restless, Irritable, and Discontented: The Basics of Relapse Prevention" Watch Video – "HBO: The Science of Relapse"	**1. Week 13 Reading Quiz**
14		**THANKSGIVING BREAK – NO NEW ASSIGNMENTS**		
15		Drug Policy & Legislation	***Required Reading:*** Doweiko – Chapter 37 & 38 ***Required Viewing:*** Watch lecture video – "Drug Policy & Legislation"	**1. Week 15 Reading Quiz**
16				

Assignment Descriptions & Details

1) Discussion Board Assignments:

There are two discussion board assignments in this course, found during weeks 5 and 8.

Week 5: Recovery Group Project Discussion Board: After attending a community self-help group and processing that in your paper, briefly share with your classmates what your experience was at the meeting. Do not just re-state what you wrote in your paper...this should be a condensed version of that with only the highlights. Tell us what struck you the most about the meeting. Were you surprised/shocked/saddened by anything you saw? What did you learn from attending the meeting? Be creative and share your experience with your classmates in a paragraph or two. Then read your classmates' responses and respond to 3 of them. Submit your initial response by Wednesday at 11:59pm and then respond to 3 classmates by Saturday at 11:59pm.

Week 8: Empathy Building Project Discussion Board: By now, your month-long Empathy Building project has come to an end. Share your successes and your setbacks with the class...tell us what worked, what didn't, do you plan to stick with the goal after this project is over, etc. Just write a paragraph telling us how it went and the primary thing you learned from this assignment. Then read your classmates' responses and respond to 3 of them. Submit your initial response by Wednesday at 11:59pm and then respond to 3 classmates by Saturday at 11:59pm.

2) Video Reflection Assignments:

Throughout the course, there are brief reflection activities aimed at assessing your understanding of the video(s) from that week. These are found in weeks 3, 7, 9, and 11.

3) Quizzes:

There will be ten reading quizzes given throughout the semester (weeks 2, 3, 4, 6, 7, 9, 11, 12, 13, 15) to assess your learning and application of the reading material for that week.

4) Recovery Group Project:

The purpose of this assignment is to become familiar with self-help recovery groups, such as Alcoholics Anonymous (AA), and Narcotics Anonymous (NA). Students are expected to attend an "open" meeting - that means anyone can attend the meeting regardless of whether they are in recovery. Links to meeting times and guidelines for attendance are provided on Blackboard to help you prepare. After attending the meeting, write a paper based on your experience, using the criteria below:

1. Introduction
    1. What is the name of the self-help group you attended and why did you decide to attend this particular group?
    2. What was the place and time of the meeting including physical surroundings of the meeting?
    3. Briefly describe the group demographics, including the number in attendance, male/female ratio, racial composition, social class, age range, and any other characteristic you found interesting.
2. Review of Meeting
    1. Describe the atmosphere and the tone of the meeting, including interaction between attendees.
    2. Describe the focus and structure of the meeting, including activities.
    3. Describe the apparent impact of the meeting on attendees.
    4. Describe two things you thought were effective or healing about the meeting and two things you thought were ineffective or counterproductive about the meetings. Reference course materials to make your point.
3. Implications for Practice
    1. What did you learn/observe about yourself in preparing for and attending the meeting?
    2. How do you think your experience will influence your work with clients with addiction issues?
    3. Who do you think might benefit most from this group?
    4. What do you think are the keys to the success of this approach?
4. Conclusion
    1. Provide a summary of your paper, including what you learned overall about self-help recovery groups.
    2. Explain how the information presented in this course applied to or was incongruent with your observations. Reference course materials to help make your point.
    3. Explain how the meeting helped you more fully understand at least three concepts learned in this course.

This paper is not just a description of what occurred at the meetings. You are also expected to describe and analyze your experience as it relates to your coursework, incorporating any appropriate references from class slides, handouts, videos, activities, readings and/or other resources to help explain or analyze what you saw or experienced throughout your paper. Do not refer to individuals from the meetings by their real name.

You may write the paper from a first-person perspective, but all other APA rules apply, including appropriate use of a cover page, 1-inch margins, 12-point font, and double-spaced text. Your grade will be based on adherence to the assignment guidelines and

inclusion of the listed information in a coherent and reflective paper. The paper should have an introduction paragraph and a concluding paragraph.

Paper length expectation: 4 pages

5) Empathy Building Project *(Signature Assignment)*:

The purpose of this assignment is to assist you in understanding what chemically dependent people face in treatment and recovery. You will also begin to assess the role personal habits play in your own life. For thirty days beginning 09/01/20, you will be asked to abstain from a legal substance/food or activity or acquire a new self-care behavior.

Substances/food to abstain from may include, for example, alcohol, nicotine, caffeine, sugar, salt, or chocolate. Activities may include, for example, using social media, going shopping, eating fast food, watching television, listening to music, cursing, or playing computer games. Consider choosing a substance/activity to give up that will be challenging (not something that you already dislike). The learning in this project comes from abstaining, thus it is important to make your very best effort in this regard.

As an alternative to abstinence, you may choose a behavior or habit that you would like to acquire as a means of self-care. For thirty days, work at developing that habit or behavior. Use the same guidelines as if you had chosen abstinence. Examples of a new behavior/habit include starting a daily exercise program, meditation, eating healthy food, or other self-care activities.

By the end of Week 1, each student should submit on Blackboard what they commit to abstain from or commit to begin for this project. You are not permitted to change your goal once the project begins. Students should also tell two significant persons in your life about this project and the reasons for it. Students are expected to complete a daily log (found at the end of this syllabus and on Blackboard) to monitor the progress made. At the end of thirty days, you will write a paper based on the criteria below:

1. Introduction
   ***Complete this section at the beginning of your thirty days*.** Discuss what you expect from this project including:
   a. What substance/food or activity are you planning to abstain from or a behavior you are planning to acquire?
   b. What is your motivation for change or lack thereof?
   c. What do you expect to experience in this project, including potential for success and potential stumbling blocks?
   d. Who are your supports and your expectations of them?
2. Reflections on the Process
   Reflect on your experience over the past thirty days. This should be an account of your struggles, successes, insights, setbacks, perceptions...etc. Incorporate course material as it relates to this project. Organize your reflections based on the bio-psycho-social and spiritual perspective.
   a. Your physical state (health, energy, sleep, nutrition)
   b. Your psychological state (motivation, emotions, coping skills, self-esteem, thoughts, insights, confidence, self-efficacy, emotional management)
   c. Your social life (social support, undermining, changes, friends, family, classmates, insights about others, reactions by others)
   d. Your spiritual state (choices, honesty, belief systems, ethics, practices, honesty, personal value system)
3. Relevance to Course
   Explain how the information presented in class applied to or was incongruent with your experience. Again, be sure to reference course materials to help make your points. This section of the project should answer the following questions:
   a. What did you learn about behavior and attitude change?
   b. How did your motivation change during the thirty days according to the stages of change?
   c. Can change occur without intrinsic desire? Please explain.
   d. What did you learn about relapse and relapse prevention, including your own relapse triggers and strategies to deal effectively with those triggers?
4. Conclusion
   Summarize what you learned through this project.
   a. Provide a summary of your paper, including what you learned overall about yourself and what chemically dependent people face in treatment and recovery.
5. Appendix
   a. Include your daily log report as a supporting document at the end of your paper.

You will be graded on your understanding and insight about how this project relates to addiction, as well as the quality of your documentation about your experience. Incorporate references from class slides, handouts, videos, activities, readings and/or other resources to help you explain or analyze what you experienced throughout the project. All students must include at least 5 references within the paper.

You may write the paper from a first-person perspective, but all other APA rules apply, including appropriate use of a cover page, 1-inch margins, 12-point font, and double-spaced text. Your grade will be based on adherence to the assignment guidelines and inclusion of the listed information in a coherent and reflective paper.

Paper length expectation: 4 pages (page limit does not include cover page, reference page, or attached daily log)

SWK 394 INTRODUCTION TO ADDICTIONS		
Empathy Building Project Daily Log		
Date	**Goal Met Y/N**	**Event/Feelings That Influenced Outcome**
09/01/20		
09/02/20		
09/03/20		
09/04/20		
09/05/20		
09/06/20		
09/07/20		
09/08/20		
09/09/20		
09/10/20		
09/11/20		
09/12/20		
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09/20/20		
09/21/20		
09/22/20		
09/23/20		
09/24/20		
09/25/20		
09/26/20		
09/27/20		
09/28/20		
09/29/20		
09/30/20		

Rubric for Empathy Building Project Paper

Introduction		
	Points	Comments
What substance/food or activity are you planning to abstain from or a behavior you are planning to acquire?	/5	
What is your motivation for change or lack thereof?	/7	
What do you expect to experience in this project, including potential for success and potential stumbling blocks?	/8	
Who are your supports and your expectations of them?		
Reflections on the Process		
Your physical state (health, energy, sleep, nutrition)	/8	
Your psychological state (motivation, emotions, coping skills, self-esteem, thoughts, insights, confidence, self-efficacy, emotional management)	/8	
Your social life (social support, undermining, changes, friends, family, classmates, insights about others, reactions by others)	/8	
Your spiritual state (choices, honesty, belief systems, ethics, practices, personal values)	/8	
Course Integration		
What did you learn about behavior and attitude change?	/7	
How did your motivation change during the thirty days according to the stages of change?	/8	
Can change occur without intrinsic desire?	/7	
What did you learn about relapse and relapse prevention, including your own relapse prevention triggers and strategies to deal effectively with those triggers?	/8	
Conclusion		
Provide a summary of your paper, including what you learned overall about yourself and what individuals with chemical dependency face in treatment and recovery.	/8	
Other		
Proper use of APA; free from grammar and spelling errors; written at college level	/5	
Daily log is filled out for each day of the month and included with the paper.	/5	

TOTAL: **/100**