1-24-2019

Curriculum Committee Report - January 24, 2019

Graduate Council

Graduate Curriculum Committee Meeting Report
Andy Holt Tower, 4th Floor Conference Room,
2:00 p.m., Thursday, January 24, 2019

Members present: Ken Anderson, Kivanc Ekici, Rachel Fleming-May, Rebecca Jackson, Jacob Latham, Sibyl Marshall (Chair), Laurie Meschke, Jack Ryan (GSS Vice-President).

.

College representatives: Katherine Ambroziak (College of Architecture and Design), David Cihak (College of Education, Health, and Human Sciences), Chuck Collins (College of Arts and Sciences), Terri Dubin (College of Nursing), Claudia Kirk (College of Veterinary Medicine), Masood Parang (Tickle College of Engineering), John Stier (College of Agricultural Sciences and Natural Resources),

Others in attendance: Mary Albrecht (Graduate School), Mehmet Aydeniz (Graduate Council Chair), Sara Bradberry (Graduate School), Jennifer Gramling (Online Programs Coordinator), Dixie Thompson (Dean of the Graduate School), and Catherine Cox (Graduate Council Liaison).

Sibyl Marshall called the meeting to order at 2:00 p.m.

The following curriculum proposals were approved as presented for recommendation to Graduate Council.

Herbert College of Agriculture

Course adds: 8
Course drops: 7
Course revisions: 9 course changes = 24

Department of Biosystems Engineering and Soil Science

Drop 5-year BS-MS (Biosystems Engineering Technology major, MS)
Drop 5-year BS-MS (Environmental and Soil Science major, MS)

College of Architecture and Design

Course revisions: 4 course changes = 4

College of Arts and Sciences

Course adds: 28
Course drops: 1
Course revisions: 36 course changes = 65

Department of English

Drop concentration: Writing concentration for the English major (MA)

Department of Theatre

Add concentration: Sound and Digital Media concentration for the Theatre major (MFA)

Haslam College of Business

Course adds: 4
Course drops: 1
Course revisions: 6 course changes = 11

Department of Business Analytics and Statistics

Drop concentration: Industrial Statistics, for the Statistics major, MS
Add concentration: Intercollegiate Graduate Statistics and Data Science, for the Statistics major, MS

College of Communication and Information

Course adds: 16
Course drops: 1
Course revisions: 7 course changes = 24

College of Education, Health, and Human Sciences

Course adds: 20
Course drops: 3
Course revisions: 36 course changes = 59

Department of Educational Leadership and Policy Studies

Drop concentration: Leadership Academy, for the Educational Administration major, MS

Department of Nutrition

Add concentration: Clinical Nutrition and Dietetics, for the Nutrition major, MS

Department of Theory and Practice in Teacher Education

Add concentration: Applied Behavior Analysis, for the Teacher Education major, MS

Tickle College of Engineering

Course adds: 20
Course drops: 3
Course revisions: 14 course changes = 37

Engineering Fundamentals

Add certificate: Engineering Education

Department of Materials Science and Engineering

Drop concentrations: for the Materials Science and Engineering major, MS
Biomaterials concentration
Materials concentration
Metallurgy concentration
Polymers concentration

Drop concentrations: for the Materials Science and Engineering major, PhD
Biomaterials concentration
Materials concentration
Metallurgy concentration
Polymers concentration

Department of Mechanical, Aerospace, and Biomedical Engineering

Add certificate: Advanced Manufacturing

Department of Nuclear Engineering

Add major and degree: Medical Physics major, MS (pending THEC approval)

Add certificate: Medical Physics

Drop concentration: Radiological Engineering, for the Nuclear Engineering major, MS

College of Law

Course adds: 2
Course drops: 0
Course revisions: 5 course changes = 7

College of Nursing

Course adds: 13
Course drops: 0
Course revisions: 1 course changes = 14

Add certificate: Pediatric Acute Care Nurse Practitioner

College of Social Work

Course adds: 2
Course drops: 1
Course revisions: 5 course changes = 8

Add certificate: Forensic Social Work

College of Veterinary Medicine

Course adds: 0
Course drops: 1
Course revisions: 1 course changes = 2

Totals:

Course Adds =	113
Course Drops =	18
Course Revisions =	124
Total course changes =	**255**

Thursday January 24, 2019 2:00 – 5:00 p.m.	Graduate Curriculum Committee Meeting	Andy Holt Tower Room 403B 4th floor conference room

AGENDA

Herbert College of Agriculture

College of Architecture and Design

College of Arts and Sciences

Haslam College of Business

College of Communication and Information

College of Education, Health, and Human Sciences

Tickle College of Engineering

College of Law

College of Nursing

College of Social Work

College of Veterinary Medicine

+ Indicates new major / degree / certificate being added

ϕ Indicates program /concentration / certificate being dropped

✓ Indicates new academic discipline added

HERBERT COLLEGE OF AGRICULTURE

All Changes Effective Fall 2019

I. COURSE CHANGES

DEPARTMENT OF AGRICULTURAL LEADERSHIP, EDUCATION AND COMMUNICATIONS

Learning Outcomes for the MS degree in Agricultural Leadership, Education and Communications

1. Students will demonstrate the ability to communicate through written scholarly work (thesis or creative component).
2. Students will demonstrate the ability to communicate through oral presentations of their thesis or creative component.
3. Students will demonstrate the ability to explore issues, objects or works though the collection and analysis of evidence that results in informed conclusions or judgements and break complex topics or issues into parts to gain a better understanding of the topic.

(ALEC) Agricultural Leadership, Education and Communications

ADD

ALEC 576 School-Based Teaching Practicum in Agricultural Education (3) Full-time job-embedded teaching practicum and teaching-related experiences in approved school-based agricultural education settings.
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 18 hours.

Rationale: The Department of Agricultural Leadership, Education and Communications offers a Master of Science in Agricultural Education and students can obtain this degree through a job-embedded program. The students must complete three hours/semester of a practicum course to complete this program. Impact on other units: None. Financial impact: None. This does support Program Learning Outcome 3 for the MS in Agricultural Leadership, Education and Communications. Support from assessment activities: The current faculty member who oversees the undergraduate agricultural education teacher preparation program will be working with students in the job-embedded program. The faculty member has determined this course would be suitable to meet the requirements of the job-embedded program in agricultural education. Expected enrollment for this course is 5-10 students per year.

REVISE TO ADD CONTACT HOUR DISTRIBUTION

ALEC 534 Methods of Teaching Agriscience (3)
Contact Hour Distribution: 2 hours of lecture and one 2-hour lab.

Formerly: No distribution noted.

DEPARTMENT OF ANIMAL SCIENCE

Learning objectives for the M.S. in Animal Science

1. Students will demonstrate the ability to apply advanced knowledge and conduct research necessary for deriving eventual solutions to problems impacting animal agriculture and humans.
2. Students will demonstrate written and oral communication skills important for relaying scientific concepts to scientific and general audiences.

Learning objectives for the Ph.D. in Animal Science

1. Student will demonstrate capacity to conduct independent, original research important for deriving eventual solutions to problems impacting animal agriculture and humans.
2. Student will demonstrate written and oral communication skills for effectively communicating new scientific knowledge to any audience (e.g., scientific, undergraduate and graduate students and/or general).

(ANSC) Animal Science

ADD

ANSC 624 Advanced Mammalian Reproduction (3) Current topics and new frontiers in reproductive biology.
Recommended Background: Reproductive physiology course.
Registration Restriction(s): Minimum student level – graduate or permission of instructor.

ANSC 635 Ruminology (3) Anatomy, physiology, and microbiology of rumen ecosystem: microbial fermentation and metabolism of polysaccharides, lipids and nitrogen.
Registration Restriction(s): Minimum student level – graduate or permission of instructor.

ANSC 650 Animal Immune Physiology (3) Interaction of the immune system with other physiological processes such as reproduction, nutrition, and endocrine that influence whole animal systems.
Recommended Background: Graduate physiology course.
Registration Restriction(s): Minimum student level – graduate or permission of instructor.

Rationale: Content of ANSC 523, 535 and 550 is based on current scientific literature. Utilization of this information as the primary learning resource while emphasizing the importance of continued independent learning after completion of coursework attests to the increased rigor and challenges of subject areas. Efforts to go beyond dogmatic dictation along with additional effort in these courses to provide other types of learning through synthesis and presentation of research based findings in a formal context warrants changing level of offering for these courses from 500 to 600 level. Adding more 600 level courses is important for the PhD program because current offering is limiting. Impact on other units: None: Response to assessment: none. Financial impact: none.

DROP

ANSC 523 Advanced Mammalian Reproduction (3)

ANSC 535 Ruminology (3)

ANSC 550 Animal Immune Physiology (3)

Current Courses Animal Science (ANSC)	Equivalent Courses Effective Fall 2019 Animal Science (ANSC)
ANSC 523	ANSC 624
ANSC 535	ANSC 635
ANSC 550	ANSC 650

DEPARTMENT OF BIOSYSTEMS ENGINEERING AND SOIL SCIENCES

Student Learning Outcomes:

1. Understanding of the scientific method as applied to research and to engineering technology design and development. Specifically, understanding the importance of developing and testing hypotheses, and of the use of scientific, mathematical, and statistical tools.
2. Capacity to effectively locate literature relevant to a topic, and to critically evaluate such literature. In particular, familiarity with the primary scientific literature, as well as secondary and commercial sources.
3. Capacity to write proposals; conduct experiments; design, construct, and test devices; and prepare coherent technical reports based on such work.
4. Understanding of professional scientific ethics, including issues such as designation of authorship, and patent rights.
5. Competence in a particular focus area of Biosystems Engineering Technology.

(BSET) Biosystems Engineering Technology

DROP 400-LEVEL UNDERGRADUATE COURSES FROM GRADUATE CATALOG

BSET 432 Agricultural and Construction Equipment (3)

BSET 435 Construction Finance / Accounting and Law (3)

BSET 452 Small Internal Combustion Engines (3)

BSET 462 Agricultural Chemical Application Technology (3)

Equivalency Table

Current Courses Biosystems Engineering Technology (BSET)	Equivalent Courses Effective Fall 2019 Construction Science and Agricultural Systems (CSAS – new academic discipline)
BSET 432 Agricultural and Construction Equipment	CSAS 432 Agricultural and Construction Equipment
BSET 435 Construction Finance / Accounting and Law	CSAS 435 Construction Finance / Accounting and Law
BSET 452 Small Internal Combustion Engines	CSAS 452 Small Internal Combustion Engines
BSET 462 Agricultural Chemical Application Technology	CSAS 462 Agricultural Chemical Application Technology

Rationale: These undergraduate courses are being switched over from Biosystems Engineering Technology to Construction Science and Agricultural Systems to support the new undergraduate CSAS program. There are no new courses, and the names and descriptions are generally the same. Impact on other units: Will need to update any BSET undergraduate course mentions in their curricula. Response to assessment: none. No changes in Outcomes. Financial impact: no actual new classes.

REVISE CREDIT RESTRICTION

BSET 514 CAD Applications to Biosystems Engineering Technology (3)
Credit Restriction: Students cannot receive credit for both CSAS 414 and BSET 514.

Formerly: Students cannot receive credit for both 414 and 514.

BSET 530 Construction Field Operations (3)
Credit Restriction: Students cannot receive credit for both CSAS 430 and BSET 530.

Formerly: May not receive credit for both 430 and 530.

BSET 535 Construction Finance/Accounting and Law (3)
Credit Restriction: Students cannot receive credit for both CSAS 435 and BSET 535.

Formerly: May not receive credit for both 435 and 535

BSET 574 Environmental Instrumentation and Monitoring (3)
Credit Restriction: Students cannot receive credit for both CSAS 474 and BSET 574.

Formerly: Students cannot receive credit for both 474 and 574.

Rationale: reflect change in previous UG courses from BSET to CSAS. Impact on other units: None. Financial impact: none.

REVISE CREDIT RESTRICTION; REMOVE (RE)PREREQUISITES AND REVISE RECOMMENDED BACKGROUND

BSET 525 Commercial Estimating (3)
Credit Restriction: May not receive credit for both CSAS 425 and BSET 525.
Recommended Background: CSAS 125 or experience in construction estimating.

Formerly:
Credit Restriction: May not receive credit for both 425 and 525.
(RE) Prerequisite(s): 125.
Recommended Background: Prerequisite course or experience in construction estimating

Rationale: reflect change in previous undergraduate courses from BSET to CSAS, and have Recommended background rather than undergraduate prerequisite. Impact on other units: None. Response to assessment: none. Financial impact: none.

REVISE CREDIT RESTRICTION AND ADD RECOMMENDED BACKGROUND

BSET 534 Production Monitoring and Automation (3)
Credit Restriction: Students cannot receive credit for both CSAS 434 and BSET 534.
Recommended Background: Working knowledge of GIS.

Formerly:
Credit Restriction: Students cannot receive credit for both 434 and 534.

Rationale: reflect change in courses from BSET to CSAS, and add additional desired background. Impact on other units: None.
Response to assessment: none Financial impact: none

✓ **ADD NEW ACADEMIC DISCIPLINE AND 400-LEVEL COURSES**

(CSAS) Construction Science and Agricultural Systems

SLOs: There is no graduate program in CSAS

ADD NEW 400-LEVEL COURSES FOR GRADUATE CREDIT

CSAS 432 Agricultural and Construction Equipment (3) Functions, selection, matching, and management of agricultural machinery systems. Tractor power ratings, engine and transmission systems, hydraulic systems, hitching, and ballasting. Field and material capacity, field efficiency, cost analysis, and machinery replacement strategies. Functional analyses of tillage operations, planters and drills, no-tillage systems, hay harvest systems, forage and small grain harvesting, and cotton harvesting. Crop drying processes, off-road machinery safety considerations, and operator ergonomics.
(RE) Prerequisite(s): Mathematics 125 or Mathematics 141 or Mathematics 152.

CSAS 435 Construction Finance / Accounting and Law (3) Construction finance and cost accounting, industry formats, fixed and variable costs, record and report practices; capital equipment, depreciation, and expensing; forecasting costs and cash flow requirements, payment processes and time value of money, surety bonds and insurance; construction law, construction contracts, legal roles and responsibilities, the regulatory environment and licensing, lien laws and the contractor's rights, national and local labor law, administrative procedures to avoid disputes.
(RE) Prerequisite(s): Accounting 200.
Comment(s): Graduate standing may satisfy prerequisites.

CSAS 452 Small Internal Combustion Engines (3) Theory, concepts and mechanics of small internal combustion engines; theoretical cycles; selection, operation, adjustment, troubleshooting and repair of single-cylinder engines.
Contact Hour Distribution: 2 hours and 1 lab.
(RE) Prerequisite(s): Mathematics 113 or Mathematics 123 or Mathematics 141 or Mathematics 151.

CSAS 462 Agricultural Chemical Application Technology (3) Equipment for application of liquid, solid, and gaseous agricultural chemicals; system components; operational characteristics; calibration; selection and management; safety considerations; materials handling and disposal methods.
Contact Hour Distribution: 2 hours and 1 lab.
(RE) Prerequisite(s): Mathematics 123 or Mathematics 141 or Mathematics 151.

Rationale: These undergraduate courses are being switched from Biosystems Engineering Technology to Construction Science and Agricultural Systems to support the new CSAS program. There are no new courses, and the names and descriptions are generally the same. Impact on other units: Will need to change any references to BSET undergraduate courses in their curricula. Response to assessment: none. No changes in Outcomes. Financial impact: no actual new classes.

DEPARTMENT OF ENTOMOLOGY AND PLANT PATHOLOGY

(EPP) Entomology and Plant Pathology

REVISE TO REMOVE REPEATABILITY

EPP 640 Seminar (1)

Formerly: Repeatability: May be repeated. Maximum 2 hours.

Rationale: We are reducing the number of required credit hours of seminar from two to one in order to increase flexibility in course choices for students. Students will continue to be required to attend weekly departmental seminars regardless of whether they are presenting a seminar. All students will continue to be required to present two departmental seminars. The first seminar will be the research proposal and will be for 1 hour of EPP 640 course credit, but the second seminar, which is the for final defense of their thesis or dissertation, will not be coupled with the seminar course. Impact on other units: None.

Financial Impact: International students routinely take more than the required number of credit hours due to credit hour requirements per semester needed to maintain their F1 visa. Requirements are 6 credit hours for those on a ½-time assistantship and 9 credit hours for those on a ¼-time assistantship or are self-funded. If international students have completed their academic coursework, they are eligible to request a reduced course load (essentially taking 3 credit hours per semester). The second credit hour of EPP 640 Seminar was normally taken during their last semester, which meant that these students did not meet the criteria for a reduced course load request. In some cases, the student had finished their other academic courses as much as three semesters earlier. Because almost all assistantships in EPP are graduate research assistantships, this change could potentially reduce tuition costs borne by the department or reduce costs to self-funded international students.

Support from assessment activities: The training they receive through attendance and presentations in seminar will not change. The increased flexibility (by dropping 1 required credit hour of seminar) will enable students to take 1-hour special topics courses offered in many departments, thus increasing their exposure to additional topics that they may not receive due to cost of additional credit hours beyond the number required for the degree.

DEPARTMENT OF PLANT SCIENCES

Learning Outcomes for the MS degree in Plant Sciences

1. Students will demonstrate ability to build upon established plant sciences-related research findings and apply currently applicable methodologies to test novel student-defined hypotheses that address problems in plant sciences and related disciplines.
2. Students will demonstrate ability to collect and categorize relevant data, analyze and interpret experimental and project results, and assess the outcome of their research efforts within the context of existing knowledge and need for future work in plant sciences and related disciplines.
3. Students will demonstrate ability to convey the relevance of their findings, via oral (SLO 3a) and/or written (SLO 3b) communications to appropriate peer academic, industry and lay audiences interested in plant sciences and related disciplinary information.

(PSES, PS) Plant, Soil, and Environmental Sciences Major (PS), PhD

Learning Outcomes for the PhD degree in Plant, Soil and Environmental Sciences (PS)

1. Students will demonstrate ability to build upon established plant sciences-related research findings and apply currently applicable methodologies to test novel student-defined hypotheses that address problems in plant sciences and related disciplines.
2. Students will demonstrate ability to collect and categorize relevant data, analyze and interpret experimental and project results, and assess the outcome of their research efforts within the context of existing knowledge and need for future work in plant sciences and related disciplines.

3. Students will demonstrate ability to convey the relevance of their findings, via oral (SLO 3a) and/or written (SLO 3b) communications to appropriate peer academic, industry and lay audiences interested in plant sciences and related disciplinary information.

(PLSC) Plant Sciences

REQUEST VARIABLE TITLE

PLSC 503 Non-Thesis Project (1-2)

Rationale: Adding variable title will enable the student to better articulate the title/project undertaken within an Academic Transcript report. Impact on other units: None Financial Impact: None. Support from assessment activities: None. Supports SLOs 1 and 2.

II. PROGRAM CHANGES

DEPARTMENT OF AGRICULTURAL LEADERSHIP, EDUCATION AND COMMUNICATIONS

REVISE REQUIREMENTS - AGRICULTURAL LEADERSHIP, EDUCATION AND COMMUNICATIONS MAJOR, MS

In the 2019-2020 Graduate Catalog, for the online program – remove current text and replace with the following.

Online Master of Science Option

Candidates seeking the Master of Science degree online option must successfully complete:

A total of 30 graduate credit hours in courses approved by the student's graduate committee.

The 30 credit hours must consist of:

- 18 credit hours of graduate credit courses in ALEC.
- 12 credit hours of electives.
- The successful passage of a final written exam.

Formerly:

Online Master of Science Non-Thesis Program

Candidates seeking the Master of Science degree online option must successfully complete:

- A total of 30 credit hours of graduate credit in courses approved by the student's graduate committee.
  - 21 credit hours of graduate credit courses in ALEC
  - 9 credit hours of graduate electives
- A final written examination with a grade of Pass is required.

Rationale: Match catalog information to existing department handbook & practices. Impact on other units: N/A. Financial impact: N/A

In the 2019-2020 Graduate Catalog, for the traditional program – add the following information as introductory text.

Traditional Master of Science Option

A total of 30 graduate credit hours in courses approved by the student's graduate committee.

The 30 credit hours must consist of:

Option 1: Agricultural Teacher Education

- 15 credit hours of required courses for agricultural education teacher licensure.
- 15 credit hours of courses recommended by academic advisor.
- The successful passage of a thesis, final written exam, or EdTPA.
- If thesis is chosen, 6 credit hours of ALEC 500 will be used as part of the 12 credit hours of electives.

Option 2: General (includes Agricultural Communications)

- 18 credit hours of ALEC courses.
- 12 credit hours of electives.
- The successful passage of a thesis, creative component, or final written exam.
- If thesis is chosen, 6 credit hours of ALEC 500 will be used as part of the 12 credit hours of electives.

In the 2019-2020 Graduate Catalog, revise text and requirements for both the thesis and non-thesis options as follows:

For thesis option: add the following bullet:

- An understanding of research ethics is also required. This departmentally-enforced requirement may be achieved through coursework (e.g., PLSC 525 /ANSC 525 /CEM 525; BCMB 614; PSYC 660) or via online (CITI RCR) training, as evidenced by presenting a valid CITI RCR certificate to the Graduate Director upon submission of the Application to Candidacy form. For research involving human subjects, CITI IRB certification may also be required.

For Non-Thesis Option - Remove the following bullet:

- A minimum of 3 credit hours of graduate credit in course work in either research methodology or statistics.

Rationale: Match catalog information to existing department handbook & practices. Impact on other units: N/A. Financial impact: N/A

DEPARTMENT OF AGRICULTURAL AND RESOURCE ECONOMICS

Learning Objectives for the MS Thesis Option in Agricultural and Resource Economics:

1. Appropriateness of conceptual frameworks in theses at the time of the thesis defense.
2. Appropriateness of methods and procedures in theses at the time of the thesis defense.
3. Professional appropriateness of oral presentations during defense of theses.

REVISE REQUIREMENTS: ACCELERATED FIVE YEAR BS-MS PROGRAM – AGRICULTURAL AND RESOURCE ECONOMICS MAJORS

In the 2019-2020 Graduate Catalog, revise text and requirements as follows:

In second paragraph, revise number 3 as follows:

3. The applicant must have completed MS Graduate Program prerequisites MATH 125, STAT 201 or STAT 207, ECON 311, and AREC 324 or BAS 320 or ECON 381 with a B or better in each course before taking graduate courses as an undergraduate"

Formerly: "The applicant must have completed MS Graduate Program prerequisites MATH 125, STAT 201 or STAT 207, ECON 311, and AREC 324 with a B or better in each course before taking graduate courses as an undergraduate"

Paragraph 4: remove current text and replace with the following:

A student who is conditionally admitted to the BS-MS Program can complete a maximum of 9 credit hours of graduate credit during the student's fourth year of undergraduate study, and use those 9 credit hours to satisfy both BS and MS degree requirements. Before enrolling in these courses, the student must: (i) Identify the courses to be taken, in consultation with the student's undergraduate advisor, proposed major professor, and thesis advisory committee members; and (ii) Obtain approval from the Graduate School and the Department of Agricultural and Resource Economics. To obtain approval from the Department of Agricultural and Resource Economics, the student must submit a completed "Agricultural and Resource Economics Conditional Admission 5 Year BS-MS" form to the Department's Director of Graduate Studies. Copies of the form are available from the Director of Graduate Studies. To obtain approval from the Graduate School, students must submit a completed "Senior Requesting Graduate Credit Form" to the Graduate School. A separate "Senior Requesting Graduate Credit Form" must be completed and submitted to the Graduate School before each semester in which the student enrolls in courses for graduate credit.

Formerly: "Any course taken for graduate credit before satisfying all of the requirements for the BS degree must be approved by both the Director of Graduate Studies in Agricultural and Resource Economics and the Graduate School. The courses must be identified in advance, in consultation with the undergraduate advisor, proposed major professor, and thesis advisory committee members. The form "Agricultural and Resource Economics Conditional Admission 5 Year BS-MS" is available from the Graduate Director and must be completed, signed by the student and the Graduate Director before submitting to the Graduate School for approval and processing. A student who is conditionally admitted to the BS-MS Program completes a maximum of 9 hours of graduate credit during the student's fourth year of undergraduate study, and applies those 9 credit hours to satisfy both BS and MS degree requirements."

DEPARTMENT OF ANIMAL SCIENCE

ADD TEXT TO CLARIFY DEPARTMENT REPEAT POLICY TO BOTH THE MS AND PHD PROGRAMS

No graduate student may repeat a course for the purpose of raising any grade already received.

DEPARTMENT OF BIOSYSTEMS ENGINEERING AND SOIL SCIENCE

Student Learning Outcomes:

1) Understanding of the scientific method as applied to research and to engineering design and development. Specifically, understanding the importance of developing and testing hypotheses, and of the use of scientific, mathematical, and statistical tools;
2) Capacity to effectively locate literature relevant to a topic, and to critically evaluate such literature. In particular, familiarity with the primary scientific literature, as well as secondary and commercial sources;
3) Capacity to write proposals; conduct experiments; design, construct, and test devices; and prepare coherent technical reports based on such work;

4) Understanding of professional scientific ethics, including issues such as designation of authorship, and patent rights; Competence in a particular focus area of Biosystems Engineering.

ϕ DROP ACCELERATED FIVE-YEAR BS-MS PROGRAM BIOSYSTEMS ENGINEERING TECHNOLOGY MAJOR, MS

Rationale: This program makes much less sense with the addition of the CSAS undergraduate program and the shifting of the classes. There are now really no graduate-level classes to support a CSAS 5-yr BS/MS, and it makes less sense for CSAS undergraduate students to take advantage of this. **There are no students currently enrolled in this program.**

Response to assessment: none. No changes in Outcomes. Financial impact: no actual new classes.

ϕ DROP ACCELERATED FIVE-YEAR BS-MS PROGRAM ENVIRONMENTAL AND SOIL SCIENCE MAJOR, MS

Rationale: The ESS faculty had never intended this to be a stand-alone 5-yr BS-MS in Environmental and Soil Science; it was rather intended as a support for the technology concentrations, with an MS in Biosystems Engineering Technology. That is also being dropped, as those concentrations are being moved to their own CSAS program. Impact on other units: None. Response to assessment: none. No changes in Outcomes. Financial impact: no actual new classes. **There are no students currently enrolled in this program.**

DEPARTMENT OF ENTOMOLOGY AND PLANT PATHOLOGY

REVISE REQUIREMENTS - ENTOMOLOGY AND PLANT PATHOLOGY MAJOR, MS

In the 2019-20 Graduate Catalog, under the EPP major, revise all 3 concentrations to reduce the hours required for EPP 640 from 2 credit hours to 1 credit hour.

Graduate Seminar (EPP 640) (1 credit hour)

Formerly: Graduate Seminar (EPP 640) (2 credit hours)

Rationale: We are reducing the number of required credit hours of seminar from two to one in order to increase flexibility in course choices for students. Students will continue to be required to attend weekly departmental seminars regardless of whether they are presenting a seminar. All students will continue to be required to present two departmental seminars. The first seminar will be the research proposal and will be for 1 hour of EPP 640 course credit, but the second seminar, which is the for final defense of their thesis or dissertation, will not be coupled with the seminar course. For requirement 5, we are deleting the reference to EPP 503, which does not apply and was a cut and paste error from the previous year. Impact on other units: None.

Financial Impact: International students routinely take more than the required number of credit hours due to credit hour requirements per semester needed to maintain their F1 visa. Requirements are 6 credit hours for those on a ½-time assistantship and 9 credit hours for those on a ¼-time assistantship or are self-funded. If international students have completed their academic coursework, they are eligible to request a reduced course load (essentially taking 3 credit hours per semester). The second credit hour of EPP 640 Seminar was normally taken during their last semester, which meant that these students did not meet the criteria for a reduced course load request. In some cases, the student had finished their other academic courses as much as three semesters earlier. Because almost all assistantships in EPP are graduate research assistantships, this change could potentially reduce tuition costs borne by the department or reduce costs to self-funded international students.

Support from assessment activities: The training they receive through attendance and presentations in seminar will not change. The increased flexibility (by dropping 1 required credit hour of seminar) will enable students to take 1-hour special topics courses offered in many departments, thus increasing their exposure to additional topics that they may not receive due to cost of additional credit hours beyond the number required for the degree.

ADD REQUIREMENTS FOR CONCURRENT MASTER'S DEGREE - ENTOMOLOGY, PLANT PATHOLOGY AND NEMATOLOGY MAJOR, PHD

In the 2019-20 Graduate Catalog, add text for requirements for concurrent master's degree as shown below:

Requirements for Concurrent Master's Degree
Applicants admitted to the EPPN PhD program who have a BS degree, but no thesis-based MS degree, will be required to complete an MS degree during the course of their PhD program. The student will work with their graduate advisor to submit a manuscript based on their original research to a peer-reviewed scientific journal. Following completion of requirements for an MS degree, including 24 graduate credit hours + 6 credit hours of EPP 500, the student will complete requirements for a PhD as outlined in the Entomology, Plant Pathology and Nematology Major, PhD requirements.

Rationale: We have had a number of qualified applicants who do not have a master's degree, but are interested in completing a PhD. Due to the additional number of credit hours required to go from an undergraduate degree directly to a PhD, these students take significantly longer to complete. Adding a concurrent MS degree will enable the department to maintain sufficient numbers of M.S. graduates to meet THEC requirements, and will give the student an additional degree and training in research and writing that will support their PhD program. Impact on other units: None. Financial Impact: None. Support from assessment activities: Not applicable.

REVISE REQUIREMENTS – ENTOMOLOGY, PLANT PATHOLOGY AND NEMATOLOGY MAJOR, PHD

In the 2019-20 Graduate Catalog, revise the fifth paragraph to reduce the course listing of EPP 640 from 2 credit hours to 1 credit hour.

Also, under all three concentrations revise to reduce the hours required for EPP 640 from 2 credit hours to 1 credit hour.

Graduate Seminar (EPP 640) (1 credit hour)

Formerly:

Seminar (EPP 640) (2 semesters for 1 credit hour each); Seminars are only given during academic semesters.

COLLEGE OF ARCHITECTURE AND DESIGN

All changes effective Fall 2019

I. COURSE CHANGES

SCHOOL OF ARCHITECTURE

REVISE TITLE

ARCH 523 Special Topics in Interior Architecture (1-6)

Formerly: Special Topics in Interior Design

Rationale: School of Interior Design changed its name to Interior Architecture, this title change reflects this larger disciplinary change.

REVISE TO DROP (RE) COREQUISITE

ARCH 541 Design II: Principles (6)

Formerly:
(RE) Corequisite(s): 521.

Rationale: ARCH 521 no longer required in program.

REVISE TO DROP (RE) COREQUISITE AND RECOMMENDED BACKGROUND

ARCH 571 Design IV: Building in the Urban Context (6)

Formerly:
(RE) Corequisite(s): 515.
Recommended Background: 282.

Rationale: ARCH 515 and 282 no longer required in program

REVISE (RE)COREQUISITE

ARCH 572 Design VI: Design Integration (6)
(RE) Corequisite(s): 560.

Formerly:
(RE) Corequisite(s): 509.

Rationale: course number for corequisite course was changed.

COLLEGE OF ARTS AND SCIENCES

All changes effective Fall 2019

I: COURSE CHANGES

DEPARTMENT OF ANTHROPOLOGY

(ANTH) Anthropology

ADD

ANTH 571 Forensic Anthropology I (3) Examination of the development and application of methods for establishing the biological profile. Exploration of the legal context in which the forensic anthropologist works. Methods to assess the forensic significance of remains and calculating the number of individuals within an assemblage.

Rationale: The subject matter in ANTH 581 now exceeds what can be addressed in a single semester and wish to spread the course over two semesters. This course will be the first part of that subject matter. Impact on other units: None. Financial impact: None.

ANTH 572 Paleopathology (3) Examines disease from biological, physiological, and sociocultural perspectives. The culture-history of each disease provides the context in which diseases first appeared and how they were experienced by individuals and the cultural impacts of certain diseases, especially infectious diseases, on communities. Laboratory sessions are designed for hands-on examination of the signatures of diseases discussed in lecture.

Rationale: This has been taught for years as a variable topics course. Paleopathology requires a tremendous amount of hands-on time. However, our diseased collection is a limited and valuable resource that cannot be taken out of the lab, requiring students to spend classroom time studying. Adding this course with a distinct lab session allows the lecture component of the course to remain in-depth and rigorous without taking away class time for lab analysis. Impact on other units: None. Financial impact: None.

ANTH 579 Variable Topics in Forensic Anthropology (1) Students enrolled in this course gain mastery of the application of forensic methods to field work and lab analyses. Best practices and current methodologies are emphasized.
Repeatability: May be repeated. Maximum 6 hours.

Rationale: The department offers 1-credit graduate seminars using a general department-wide variable course number. This proposal seeks a dedicated course number for forensic topics. Impact on other units: None. Financial impact: None.

REVISE TO REMOVE (RE) PREREQUISITE AND ADD RECOMMENDED BACKGROUND

ANTH 413 Dynamics of Health and Illness (3)
Recommended Background: 130 or 137.

Formerly: (RE) Prerequisite(s): 130 or 137.

ANTH 414 Political Anthropology (3)
Recommended Background: 130 or 137.

Formerly: (RE) Prerequisite(s): 130 or 137.

ANTH 415 Environmental Anthropology (3)
Recommended Background: 130 or 137.

Formerly: (RE) Prerequisite(s): 130 or 137.

ANTH 421 Refugees and Displaced People (3)
Recommended Background:130 or 137.

Formerly: (RE) Prerequisite(s): 130 or 137.

ANTH 425 Humanitarianism (3)
Recommended Background: 130 or 137.

Formerly: (RE) Prerequisite(s): 130 or 137.

Rationale: These courses attract and are being promoted to students in other programs and majors and the current prerequisite blocks many students from registering. We are changing the prerequisites to recommended background to remedy this situation. Impact on other units: None. Financial impact: None.

REVISE TITLE AND DESCRIPTION; DROP (DE) PREREQUISITE; ADD (RE) PREREQUISITE

ANTH 581 Forensic Anthropology II (3) Builds on the skills developed in ANTH 571 by examining pathological conditions of the skeleton and other individualizing features for positive identification. The interpretation of trauma and taphonomic markers are also detailed as is the estimation of the postmortem interval.
(RE) Prerequisite: 571.

Formerly: Forensic Anthropology (3) Application of human identification methods to skeletal/dental tissues. Evolving role of forensic anthropology in medico-legal system. Relationship of anthropology to pathology, odontology and subsequent legal responsibilities. (DE) Prerequisite(s): 480.

Rationale: Examination of the subject matter in this course now exceeds what can be addressed in a single semester. We wish to spread the course over two semesters. This will be the second part with the first part covered in the new course 571. Impact on other units: None. Financial impact: None.

SCHOOL OF ART

(ART) Art

ADD NEW 400-LEVEL COURSE FOR GRADUATE CREDIT

ART 456 Studio Art Internship (1-6) On-site, practical work designed to bridge the university experience with the workplace prior to graduation. Must be pre-arranged with the department.
Repeatability: May be repeated. Maximum 6 hours.

Rationale: The internship number will give art students the opportunity to work in the field, under School of Art guidance, to gain practical experience in the arts. Impact on other units: None. Financial impact: None.

(ARTB) Art Three-Dimensional Arts

ADD NEW 400-LEVEL COURSES FOR GRADUATE CREDIT

ARTB 443 Advanced Mold-Making and Casting (4) Advanced exploration of casting methods related to metals including bronze, aluminum and iron. Emphasis on individual studio and research projects.

ARTB 445 Advanced Metal Fabrication (4) Advanced exploration of construction in steel and other metals through welding, design of cold connections, and engineering of structural components.

ARTB 446 Advanced Mixed-Media Sculpture (4) Advanced investigation into the sculptural possibilities of installation art, performance, and multi-media. Contemporary issues are examined through research and studio projects.

Rationale: These are advanced level courses needed in the areas. The 300-level classes will now be taught at the intermediate level. Impact on other units: None. Financial impact: None.

(ARTH) Art History

ADD NEW 400-LEVEL COURSE FOR GRADUATE CREDIT

ARTH 405 Topics in Visual and Legal Culture (3) Introduction to laws that govern creation, circulation, and criminalization of certain artworks. Highlights the often surprising ways in which images, objects, and laws knit together to create a form of social connective tissue – a finely grained network that simultaneously reflects and shapes its particular historical moment. Drawing on the methodologies of both art history and legal history, this course will challenge students to think critically about the visual arts, the legal system, and, ultimately, our cultural understanding of creativity itself.

Rationale: This course fills a crucial gap in the University's art history offerings by introducing undergraduate and graduate students to important issues in both museum studies and legal practice, providing Art MFAs with a basic sense of the legal framework that directly impacts their work, helping to prepare pre-law undergraduates for law school, and forging connections between the College of Arts and Sciences and the College of Law, ideally by becoming a part of the University's 3+3 program.

DEPARTMENT OF EARTH AND PLANETARY SCIENCES

(GEOL) Geology

ADD

GEOL 524 GIS for Geoscientists (3) Introduction to Geographic Information Systems (GIS), which are computer systems for input, storage, manipulation, and display of data georeferenced to the surface of the Earth or other planetary bodies. Participants will become familiar with a GIS software package, learn fundamental concepts of mapping and data manipulation, and will design and execute a GIS project in their own area of geologic interest.
Recommended Background: Two introductory geology or physical geography courses.

Rationale: This course was run with a 490/590 designation as a trial run. This change will formalize the course with a number and a set number of credit hours. Impact on other units: None. Financial impact: None.

GEOL 543 Sustainable Cities and Landscapes (3) Examine the ecology of urban systems. Overview of basic ecological principles, how the emergence of cities has impacted natural systems and how this impact has accelerated. Focus on solutions, most notably the various ways that cities can be designed to reduce human impacts. The ultimate goal is to design cities to meet human needs while reducing the human footprint by increasing ecological functions.

Rationale: Geology 443 is already taught as an undergraduate course and will be modified for graduate students with additional content. Impact on other units: None. Financial impact: None.

GEOL 554 Environmental Restoration (3) Applications of ecology and geological sciences toward restoring natural systems to become more fully functioning ecosystems. Topics include geological mitigation, ecological succession, non-native species, and many case studies. At least one field trip to a nearby ecological restoration site will be required.
Recommended Background: An introductory course in geology, physical geography, conservation or basic ecology.

Rationale: Geology 454 is being taught as an undergraduate course and as 554 is being modified for graduate students by adding additional assignments. Impact on other units: None. Financial impact: None.

REVISE TITLE ON PRIMARY CROSS-LISTED COURSE

GEOL 450 Landscapes: Earth and Elsewhere (3)
Cross-listed: Same as Geography 450.

Formerly: Geomorphology

Rationale: The title is being revised to match the title of the new R designated course being proposed. Impact on other units: None. Financial impact: None.

REVISE 400-LEVEL PRIMARY COURSE TO ADD A CROSS LISTING, DELETE RECOMMENDED BACKGROUND AND ADD (RE) PREREQUISITES

GEOL 465 Geomicrobiology (3) Introduction to interactions between microbes and earth materials (rock, soil, water). Course will identify and evaluate key biogeochemical and genetic evidence used to determine biotic from abiotic processes in modern and ancient systems. Topics include microbial ecology and diversity, community structure, biogeochemistry, molecular biology, major environmental habitats, astrobiology, and geomicrobiological applications for geology, engineering, and mining.
Cross-listed: (Same as Microbiology 465.)
(RE) Prerequisite(s): ENGL 102, 132, 290, or 298 and one eight-credit sequence chosen from Astronomy 151-153 and 152-154; Astronomy 217-218; Biology 101-102; Biology 113-114-115; Biology 150-160-159; Biology 158-168-167; Chemistry 100-110; Chemistry 120-130; Chemistry 128-138; Geography 137-132; or two courses chosen from Geology 101, 102, 103, 104, 107, 108; or Physics 135-136, 137-138, or 221-222.

Formerly: Introduction to interactions between microbes and earth materials (rock, soil, water). Course will identify and evaluate key biogeochemical and genetic evidence used to determine biotic from abiotic processes in modern and ancient systems. Topics include microbial ecology and diversity, community structure, biogeochemistry, molecular biology, major environmental habitats, astrobiology, and geomicrobiological applications for geology, engineering, and mining.
Recommended Background: Two 100-level geology courses, one lab course in geology and one lab course in chemistry, or consent of instructor.

Rationale: Microbiology wishes to cross-list this course and the departments felt that prerequisites were needed instead of the recommended background. Impact on other units: Cross listed with Microbiology. Financial impacts: None.

DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY

(EEB) Ecology and Evolutionary Biology

ADD 400-LEVEL COURSE FOR GRADUATE CREDIT AND REQUEST VARIABLE TITLE

EEB 409 Perspectives in Ecology and Evolutionary Biology (3) Forefront considerations of ecology, behavior, and evolutionary biology. Emphasis on current developments for applications, including societal and economic impacts and moral and ethical implications. An oral presentation and a referenced library-research essay are required. Writing-emphasis course.
(RE) Prerequisite(s): English 102, 132, 290, or 298.
Repeatability: May be repeated with consent of instructor. Maximum 9 hours.

Rationale: This course is being revised in the Undergraduate Catalog and the department feels it would also be appropriate for graduate students. Impact on other units: None. Financial impact: None.

ADD 400-LEVEL COURSES FOR GRADUATE CREDIT

EEB 412 Environmental Toxicology (3) Principles of toxicology focusing on fate and effects of chemicals in the environment. Topics include history of environmental toxicology; contaminant classification, source, fate, and effects; toxicokinetics; dose-response; major body system contaminant interactions; reproductive toxicology, mutagenesis, teratogeneses, and carcinogenesis; endocrine disruptors; bioaccumulation; toxicity testing; population to global ecological effects; risk assessment; environmental laws and policies.
Recommended Background: general biology, organic chemistry.

EEB 419 Global Change Ecology (3) Gain an in-depth understanding of current, global-scale environmental changes and the consequences of these changes for species, ecological communities, and humankind. Topics include climate change, habitat fragmentation, invasion biology, and larte-scale pollution in the Anthropocene with a focus on human-dimensions to these global challenges. Students will develop a greater appreciation for global change and the connections between humans and the natural world. Course will be a mix of lectures, reading of primary literature, group discussion/participation, and field research.
(RE) Prerequisite(s): Biology 260.

EEB 420 Fungal Diversity (3) Ecology and evolutionary biology of fungi revealed mostly through use of molecular techniques. Many fungi, and the ecological roles they serve, are often obscure due to their ephemeral nature, difficulty of detection, and convergent gross morphological similarities. Advances in molecular biology have uncovered an unanticipated depth of diversity in fungi and permitted scientists to address research questions not possible until only recently. This seminar will provide an overview of fungal ecology and evolution by examining the primary literature. Multiple dimensions of fungal diversity are explored: taxonomic, genetic, and functional.

EEB 422 Landscape Ecology (3) Online course broadens the spatial scale of ecological study to consider influence of landscape-level patterns on ecological processes. Important issues, concepts, and methodologies relevant to landscape ecology. Students will a) research scientific literature and present findings in short oral presentations; b) research popular writing related to landscape ecology and present findings in short oral presentations; c) perform, analyze, and orally communicate computer simulation experiments.

EEB 423 Conservation Decision Making (3) Online course will teach structured decision making process. Learn to enable people representing diverse interests to come together to form a common understanding and to create scientifically rigorous, inclusive, defensible, and transparent conservation and natural resource management plans. Course requires regular interaction with classmates in weekly online discussion, a mock conservation planning project, and a small-group evaluation of a published conservation plan (which includes a recorded interview of one of its authors).

EEB 425 Communicating the Science of Climate Change Biology (3) Online course examines impacts of global climate change on biodiversity. Understand past, current, and projected impacts of climate change and evaluate proposed solutions for the current climate crisis. Discuss implications of climate change science. Choose several socially-relevant climate change biology topics to research and communicate to the public.

EEB 430 Invasion Biology (3) History, biology, and management of biological invasions, geography and scale of invasions, ecological effects, impacts to humans, and evolution of introduced and native species. Differences between “introduced” and “invasive” species will inform discussions about prevention, regulation, detection, management, and eradication. Comprehensive consideration of interesting case studies. Apply knowledge in a variety of scenarios and fields. Discussion of controversies surrounding biological invasions and prospects for the future of invasions considering biotic homogenization, animal rights, human activity, climate change, and management with new technologies.

EEB 451 Research Ethics (3) Ethics of scientific research with emphasis on biological sciences from genetic to ecological research. Ethics of intellectual property, allocation of resources for research, genetic engineering, research on marginalized and vulnerable populations, research on non-human animals, conservation biology, ecological fieldwork and more.

EEB 481 Avian Diversity (3) Provides strong foundation in global and regional diversity of birds, their biogeography, evolution, and ecology. Learn to identify birds by plumage, voice, and behavior. Familiarize yourself with major groups of North American birds, their habitats and distributions and learn about the value of avian natural history collections and the challenges and rewards of preparing bird specimens.

EEB 485 Ethnobiology: Theory and Methods (3) Dynamic relationships between humans and their environment. Focus on understanding of the drivers of human decision making and choice in plant and animal use which is critical for designing globally sustainable management plans.

Rationale: These courses are being either added to or revised in the undergraduate catalog. The department feels that they are also appropriate for graduate students. Impact on other units: None. Financial impact: None.

ADD

EEB 513 Art and Organism - Integrative Biology of Aesthetic Experience (3) Integrative approach to fundamental concepts of developmental biology, ecology, evolutionary biology, and physiology applied to culture, art and aesthetic experience.

Rationale: Each year graduate students want to take EEB 413 for credit. EEB 513 will be a graduate level course to correspond to the undergraduate course but with a higher work load. Impact on other units: None. Financial impact: None.

EEB 580 Population Modeling (3) Recent advances in modeling dynamics of size-structured populations to answer ecological and conservation questions. Use R to develop matrix and integral population models, learn to conduct sensitivity and elasticity analyses for transient and asymptotic dynamics, develop stochastic (iid, Markovian) models and age-from-stage models.
(RE) Prerequisite: 411.

Rationale: This course will introduce students to various modeling techniques in population ecology with an emphasis on structured population modeling. The course is unique but will complement other existing courses by reinforcing previously acquired skills in statistics and R programming. Impact on other units: None. Financial impact: None.

REVISE DESCRIPTION

EEB 503 Ecology and Evolutionary Biology Seminar (1) Advanced topics in ecology, behavior, and evolutionary biology. Required of first- and second-year graduate students, as well as more senior graduate students on GTA support. Senior departmental majors and other graduate students are encouraged to enroll.

Formerly: Advanced topics in ecology, behavior, and evolutionary biology. Required of all first- and second-year graduate students. Senior departmental majors and other graduate students are encouraged to enroll.

Rationale: The department is proposing a more detailed description. Impact on other units: None. Financial impact: None.

REVISE CREDIT HOURS

EEB 509 Core: Ecology (3)

Formerly: 4

EEB 511 Core: Evolution (3)

Formerly: 4

Rationale: These courses are required for all incoming graduate students. The faculty voted to remove some of the required content from them to allow students to have more flexibility to take seminars to address their individual needs. Impact on other units: None. Financial impact: None.

REVISE DESCRIPTION

EEB 550 Ecological Niche Models and Species Distributions (1) Species niches and spatial patterns – course will combine lectures with computer demonstrations and practice. Students are expected to develop and work on an instructor approved project during class and present project results at the end of the semester. This hands-on course will be structured in three modules: I. Species' ranges in GIS; II. Species' niches – ecological niche modeling; and III. Spatial patterns of biodiversity - macroecology and conservation. Each module will last 5 weeks and students have the option to enroll in one, two, or three modules.

Formerly: Ecological Niche Models and Species Distributions (1) Species niches and spatial patterns – course will combine lectures with computer demonstrations and practice. Students will develop and work on an instructor approved project during class and present project results at the end of the semester. This hands-on course will be structured in three modules: I. Species' ranges in GIS; II. Species' niches – ecological niche modeling; III. Spatial patterns of biodiversity – macroecology and conservation. Each module will last 5 weeks and students have the option to enroll in one, two, or three modules.

Rationale: The department feels the description needs more detail. Impact on other units: None. Financial impact: None.

REVISE TITLE

EEB 583 Advanced Biogeography (3)

Formerly: Zoogeography

Rationale: The new title is more appropriate for the course. Impact on other units: None. Financial impact: None.

REVISE REPEATABILITY

EEB 602 Advanced Topics in Ecological Process and Structure (1-3)
Repeatability: May be repeated with consent of department. Maximum 12 hours.

Formerly: Repeatability: May be repeated with consent of department. Maximum 9 hours.

EEB 603 Advanced Topics in Evolutionary Biology (1-3)
Repeatability: May be repeated with consent of department. Maximum 12 hours.

Formerly: Repeatability: May be repeated with consent of department. Maximum 9 hours.

EEB 606 Advanced Topics in Conservation Biology (1-3)
Repeatability: May be repeated with consent of department. Maximum 12 hours.

Formerly: Repeatability: May be repeated with consent of department. Maximum 9 hours.

EEB 607 Seminar in Ecology and Evolutionary Biology (1)
Repeatability: May be repeated. Maximum 15 hours.

Formerly: Repeatability: May be repeated. Maximum 12 hours.

EEB 609 Advanced Topics in Comparative Animal Behavior (1-3)
Repeatability: May be repeated with consent of department. Maximum 12 hours.

Formerly: Repeatability: May be repeated with consent of department. Maximum 9 hours.

EEB 610 Advanced Topics in Mathematical, Theoretical and Computational Ecology (1-3)
Repeatability: May be repeated with consent of department. Maximum 12 hours.

Formerly: Repeatability: May be repeated with consent of department. Maximum 9 hours.

EEB 611 Advanced Topics in Organismal Biology (1-3)
Repeatability: May be repeated with consent of department. Maximum 12 hours.

Formerly: Repeatability: May be repeated with consent of department. Maximum 9 hours.

EEB 612 Advanced Topics in Environmental Toxicology (1-3)
Repeatability: May be repeated with consent of department. Maximum 12 hours.
Cross-listed: Same as Biochemistry and Cellular and Molecular Biology 612.)

Formerly: Repeatability: May be repeated with consent of department. Maximum 9 hours.

Rationale: These numbers are used for various special topics. Students are maxing out hours for these courses. The maximum is being increased to allow students to take more special topics courses. Impact on other units: None. Financial impact: None.

DEPARTMENT OF ENGLISH

(ENGL) English

REVISE TITLE

ENGL 474 Teaching English as a Second or Foreign Language (3)

Formerly: Teaching English as a Second or Foreign Language I (3)

Rationale: This course was originally paired with 475, Teaching English as a Second or Foreign Language II. 475 was dropped from the catalog in Fall 2005 and we have no plans to replace it so this course title is being changed to reflect its standalone status in our curriculum. Impact on other units: Cross listed with Linguistics. That title is being revised also. Financial impact: None.

DEPARTMENT OF GEOGRAPHY

(GEOG) Geography

REVISE TO ADD (DE) PREREQUISITE:

GEOG 411 Intermediate Geographic Information Science (3) Concepts and methods of spatial analysis and their application using geographic information systems software and techniques. Emphasizes both theoretical and applied aspects of GIS.
(DE) Prerequisite(s): GEOG 311 or consent of instructor.

Formerly: No previous (DE) Prerequisite.

Rationale: GEOG 311 has been modified to include an introductory GIS component and making it a prerequisite for 411 allows the latter to begin with more advanced material. Impact on other units: None. Financial impact: None.

REVISE TITLE OF SECONDARY CROSS-LISTED COURSE

GEOG 450 Landscapes: Earth and Elsewhere (3)
Cross-listed: (See Geology 450.)

Formerly: Geomorphology

Rationale: The primary department is revising the title of this course. Impact on other units: Earth and Planetary Sciences (Geology) is the primary department. Financial impact: None.

INTERDISCIPLINARY PROGRAMS

LINGUISTICS

REVISE TITLE OF SECONDARY CROSS LISTED COURSE

LING 474 Teaching English as a Second or Foreign Language (3)
Cross-listed: (See English 474.)

Formerly: Teaching English as a Second or Foreign Language I

Rationale: The primary department is revising the title. Impact on other units: English is the primary department. Financial impact: None.

DEPARTMENT OF MATHEMATICS

REVISE (RE) PREREQUISITE:

MATH 421 Combinatorics (3)
(RE) Prerequisite(s): 251 or 257.

Formerly: (Re) Prerequisite(s): 300 or 307.

Rationale: This change will make the course available to more students. Impact on other units: None. Financial impact: None.

DEPARTMENT OF MICROBIOLOGY

ADD NEW 400-LEVEL COURSE AS A SECONDARY CROSS-LISTED COURSE

MICR 465 Geomicrobiology (3)
Cross-listed: (See Geology 465.)

Rationale: This is an appropriate course for the Microbiology program and has been used in the program description under the GEOL number. Impact on other units: Cross-listed: Geology is the primary course. Financial impact: None.

DEPARTMENT OF MODERN FOREIGN LANGUAGES AND LITERATURES

(GERM) GERMAN

REVISE (RE) PREREQUISITE(S) ON 400-LEVEL COURSES

GERM 419 German Fairy Tales and Literary Fantasies (3)
(RE) Prerequisite(s): Two courses from 321, 322, 324, 325, 326.

Formerly: (RE) Prerequisite(s): Two courses from 321, 322, 325.

GERM 420 Selected Topics in German Literatures and Cultures (3)
(RE) Prerequisite(s): Two courses from 321, 322, 324, 325, 326.

Formerly: (RE) Prerequisite(s): Two courses from 321, 322, 325.

GERM 433 Nation, Race, and Ethnicity (3)
(RE) Prerequisite(s): Two courses from 321, 322, 324, 325, 326.

Formerly: (RE) Prerequisite(s): 321 and 322.

GERM 434 Extraordinary Wo(Men) – Outcasts, Rebels, Martyrs, and Saints (3)
(RE) Prerequisite(s): Two courses from 321, 322, 324, 325, 326.

Formerly: (RE) Prerequisite(s): Two courses from 321, 322, 325.

GERM 435 Structure of the German Language (3)
(RE) Prerequisite(s): Two courses from 321, 322, 324, 325, 326.

Formerly: (RE) Prerequisite(s): 311 and 312 and two courses from 321, 322, 325.

GERM 455 German Literatures and Cultures (3)
(RE) Prerequisite(s): Two courses from 321, 322, 324, 325, 326.

Formerly: (RE) Prerequisite(s): 321 and 322.

Rationale: These changes reflect revisions to course numbering at the 300-level. Impact on other units: None. Financial impact: None.

SCHOOL OF MUSIC

(MUTH) Music Theory

REVISE TITLE, DESCRIPTION, DROP REGISTRATION PERMISSION; ADD (RE) COREQUISITE AND RECOMMENDED BACKGROUND

MUTH 520 Analytical Techniques I (3) Materials and analysis of tonal music in a variety of styles from the Baroque to the present day. Topics may include tonal, style, and Schenkerian analysis; phrase rhythm; psychological approaches; and narrative theory. *Note: MUTH 520 and 521 are not required in sequence. Either may be taken at any time*.
(RE) Corequisite(s): MUSC 510.
Recommended Background: 400 or passing grade on music theory diagnostic exam.

Formerly: Analytical Techniques I (3) Analytical techniques, contemporary approaches. Tonal and neotonal music.
Registration Permission: Consent of instructor.

REVISE TITLE AND DESCRIPTION; ADD (RE) COREQUISITE

MUTH 521 Analytical Techniques II (3) Materials and analysis of music from a variety of styles occurring from the dissolution of tonality through present day. Topics may include set and scale theories, serialism, timbral analysis, contour space, rhythmic developments, Neo-Riemannian theory, narrative theory, and algorithmic composition. *Note: MUTH 520 and 521 are not required in sequence. Either may be taken at any time.*
(RE) Corequisite(s): MUSC 510.

Formerly: Analytical Techniques of Recent Music (3) Materials and analysis of music in the diverse styles of recent music. Topics may include set and scale theories, serialism, timbral analysis, contour space, rhythmic developments, and algorithmic composition.

Rationale: The Theory/Composition area is updating the course titles and descriptions to better represent the current course structures. Though 520 is generally tonal and 521 post tonal music, we are concerned that those titles are too confining. These non-specific titles with more detailed descriptions of possibilities allow for some flexibility of topics within the courses. We are adding MUSC 510 Bibliography as a co-req, similar to what Musicology does for their 500-level seminars. We believe this will help improve the analytical papers in these courses and it should not create scheduling delays or problems since MUSC 510 is now offered each semester. Impact on other units: None. Financial impact: None.

DEPARTMENT OF PHYSICS AND ASTRONOMY

(PHYS) Physics

REVISE (RE) PREREQUISITES AND DROP RECOMMENDED BACKGROUND

PHYS 411 Introduction to Quantum Mechanics (3) Fundamental principles of quantum mechanics. The Uncertainty Principle. Solutions of the Schrödinger equation in one dimension. Bound states. Angular momentum. The Hydrogen atom. Required course for all physics majors.
(RE) Prerequisite(s): 250 and Mathematics 241 and Mathematics 251.

Formerly: (RE) Prerequisite(s): 250.
Recommended Background: A course (200-level or higher) in advanced calculus.

Rationale: Math 241 and 251 are being specified in the prerequisites for clarity and to remove the ambiguity of the now-eliminated Recommended Background. Math 251 is being added to the prerequisites to support vector-space (matrix method) approaches to the description of quantum systems. Impact on other units: None expected. Financial impact: None.

DEPARTMENT OF PSYCHOLOGY

(PSYC) Psychology

ADD

PSYC 526 Research Methods in Behavioral Neuroscience (3) Introduction to the multidisciplinary research methods of behavioral neuroscience. Hands-on laboratory experiments in behavioral neuroscience, data analysis, written and spoken presentations, and ethical and regulatory issues related to the study of animals in behavioral neuroscience.
Comments: Students must be comfortable handling rodents, performing surgical procedures, and conducting behavioral testing.

Rationale: Provides students the opportunity to participate in an encompassing course that emphasizes technical, procedural, and methodological elements of animal-based multidisciplinary research for the study of behavioral neuroscience. Typically, graduate students garner knowledge in multidisciplinary research techniques and procedures by rotating through various research labs. Additionally, current methodology courses do not contain content relevant to animal research in behavioral neuroscience; students must confront animal-based research issues by becoming dependent on their mentor or by learning through trial-and-error. This course will consolidate in detail the various research techniques – traditional and novel – that define animal-based behavioral neuroscience

research. This course will develop a comprehensive program to bolster graduate students' overall understanding of experimental animal research and address and advise students on common technical and procedural issues that arise in animal research. Impact on other units: None. Financial impact: None.

REVISE TITLE AND DESCRIPTION

PSYC 597 Development and Psychopathology (3) Developmental aspects of behavior from a life course perspective and how normative development informs the development of psychopathology and vice versa.

Formerly: Developmental Psychopathology
Research and theory on pathways to psychological disorders and personal adjustment.

Rationale: Title and description are changing to reflect new requirements from the agency that accredits our doctoral programs in clinical and counseling psychology (the American Psychological Association). The course will cover both aspects (normative development and psychopathology) as well as integrate the topics into a full learning experience, consistent with new accrediting standards. Impact on other units: None. Financial impact: None.

DEPARTMENT OF RELIGIOUS STUDIES

(REST) Religious Studies

ADD

REST 581 Public Health in Holocaust Ghettos (3) Explores a myriad of public health issues connected with incarceration in ghettos during World War II. Students will engage in research on the topic using primary source materials including oral histories, documents, and other available resources.
Repeatability: May be repeated. Maximum 6 hours.

Rationale: Adding course to create more interdisciplinary research opportunities for graduate students. Impact on other units: None. Financial impact: None.

DROP 400-LEVEL COURSE FROM THE GRADUATE CATALOG

REST 401 Texts and the Study of Texts (3)

Rationale: This course is no longer a priority for the current faculty and is not prominent in our current curriculum. The topic of texts and their interpretation is covered in many other courses on more specific traditions. Impact on other units: None. Financial impact: None.

DEPARTMENT OF SOCIOLOGY

(SOCI) Sociology

ADD 400-LEVEL COURSE FOR GRADUATE CREDIT

SOCI 460 Capitalism and Racism (3) Explores the emergence of race and racism with capitalism through an examination of capitalist geographies, institutions, racialized labor dynamics, and in resistance to various forms of domination. Course themes may include racial slavery, divisions of labor, immigration, urban development and gentrification, financialization, privatization, globalization, intersectionality, and resistance movements.

Rationale: This course is being revised for the undergraduate catalog and the department believes the course will be of interest to graduate students as well. Impact on other units: None. Financial impact: None.

PART II: PROGRAM CHANGES

DEPARTMENT OF ANTHROPOLOGY

REVISE DISASTERS, DISPLACEMENT AND HUMAN RIGHTS GRADUATE CERTIFICATE

In the 2019-20 Graduate Catalog remove current description and requirements and replace with the following:

The graduate certificate in Disasters, Displacement and Human Rights (DDHR) is intended for degree-seeking and non-degree seeking graduate students wishing to develop specialized knowledge and research skills in the anthropological study of natural and unnatural disasters and humanitarian crises, forced migration, and human rights investigations, policies, practices, and norms. Candidates must apply for admission to the Certificate program through Graduate Admissions and complete 18 credit hours of approved coursework, taken for graduate credit. Graduate students who wish to earn the Certificate and have already earned the DDHR Concentration as undergraduate Anthropology majors need to apply to the Certificate program through the Graduate Admissions Office and then complete 18 credit hours of elective credit to obtain the Graduate Certificate. For all students pursuing the Certificate, fifteen (15) credit hours may be used towards Anthropology graduate requirements. Three (3) "new" credit hours are required that have not been used to meet any other degree requirements. Note that 500 and 600-level equivalents may be available for courses at the 400-level.

Required (9 credit hours)
ANTH 419, ANTH 420, ANTH 489 (or the 500 and 600 level equivalents)

Electives (choose three – 9 credit hours)
ANTH 413, ANTH 414, ANTH 415, ANTH 416, ANTH 418, ANTH 421, ANTH 423, ANTH 425, ANTH 432, ANTH 454, ANTH 523, ANTH 581, ANTH 613.

Special topics courses (ANTH 441, ANTH 459, and ANTH 469), independent study, and courses taken outside of Anthropology, where appropriate, may be petitioned for DDHR credit and are subject to approval by the program director. Graduate students in other departments and Colleges are eligible for the certificate by application to, and approval by, the Graduate School and Department of Anthropology. Departmental prerequisites may be waived for admitted graduate students in other departments and Colleges. The certificate will be issued upon university graduation following approval of the Graduate School. A minimum 3.0 GPA must be earned in all certificate courses. The certificate reflects specialized academic training only and does not authorize holders as practitioners in any field.

Formerly: The graduate certificate in Disasters, Displacement and Human Rights (DDHR) is intended for currently admitted graduate students wishing to develop specialized knowledge and research skills in the anthropological study of natural and unnatural disasters and humanitarian crises, forced migration, and human rights investigations, policies, practices, and norms. Candidates must complete an application and 18 credit hours of coursework, taken for graduate credit. These credit hours, which may be used towards Anthropology graduate requirements, include the following:

Required (9 credit hours): ANTH 419, ANTH 420, ANTH 489.

Electives (choose three - 9 credit hours).
ANTH 414, ANTH 415, ANTH 421, ANTH 432, ANTH 454, ANTH 523, ANTH 613.

Special topics and independent study, where appropriate, may be petitioned for DDHR credit and are subject to approval by the relevant faculty. Graduate students in other departments and Colleges are eligible for the certificate by application to, and approval by, the Anthropology faculty. Departmental prerequisites may be waived for accepted graduate students in other departments and Colleges. The certificate will be issued upon university graduation. A minimum 3.0 GPA must be earned in all certificate courses. The certificate reflects specialized academic training only and does not authorize holders as practitioners in any field.

DEPARTMENT OF CHEMISTRY

REVISE REQUIREMENTS – CHEMISTRY MAJOR, PHD

In the 2019-20 Graduate Catalog, at the 7th bullet, 3rd course sequence, delete CHEM 553. Revise sequence to:

CHEM 550-CHEM 551-CHEM 552

Formerly: CHEM 550-CHEM 551-CHEM 552-CHEM 553

Rationale: This will provide students greater flexibility in choosing their curriculum, particularly since there are many students pursuing wide-ranging interdisciplinary interests. This would allow these students to choose coursework that best matches their interests. The 553 course material focuses primarily on characterization experiments that appropriate organic chemistry students master through consistent repetition during their dissertation research. The most critical 553 material will be incorporated into other courses that will remain required for the sequence. 553 will remain as one optional course for students to complete toward their graduation requirements. Impact on other units: None. Financial impact: None.

DEPARTMENT OF EARTH AND PLANETARY SCIENCES

REVISE REQUIREMENTS – GEOLOGY MAJOR, MS

In the 2019-20 Graduate Catalog, under the Requirements heading, delete current text and replace with the following:

Requirements
The department offers a thesis option for its regular master's program and a non-thesis option for its concurrent master's program. Successful completion of the regular master's degree requires a minimum of 24 credit hours approved graduate coursework, and six credit hours of thesis (GEOL 500), an approved written thesis proposal, successful oral defense of a written thesis, and a minimum cumulative 3.0 GPA in all graded graduate course work. The department also has separate course requirements in addition to University requirements. Students pursuing an MS degree must enroll in GEOL 595 every semester they are in residence unless course or teaching conflicts preclude a student from being present. Students must also enroll in GEOL 596 one time during their residency. Taking courses from outside the department is encouraged. Before receiving an MS degree, students must demonstrate committee-approved proficiency in field-based Earth Sciences.

For students enrolled in the PhD program, a concurrent master's degree may be awarded as a 30 credit hour project-based (non-thesis option). To be eligible a student should:

a) not have a prior master's degree in Geology;
b) have successfully completed 30 credit hours of approved graduate coursework;
c) have demonstrated a committee-approved proficiency in field-based Earth Sciences;
d) have a PhD dissertation proposal accepted;
e) have passed his/her preliminary exams; and f) have at least one first author paper submitted for consideration for publication in a peer-reviewed journal.

Formerly:
Requirements
The department offers only a thesis option in its master's program. Successful completion of the master's degree requires a minimum of 24 credit hours approved course work, and six credit hours of thesis credit (GEOL 500), an approved written thesis proposal, successful oral defense of a written thesis, and a minimum cumulative 3.0 GPA in all graded graduate course work. The department also has separate course requirements in addition to University requirements. Students pursuing a MS degree must enroll in GEOL 595 every semester they are in residence unless course or teaching conflicts preclude a student from being present. Students must also enroll in GEOL 596 one time during their residency. Taking courses from outside the department is encouraged. Before receiving an MS degree, students must demonstrate committee-approved proficiency in field-based Earth Sciences.

Rationale: This change is needed for those students who are enrolled in the PhD program and have completed course requirements for the regular master's degree but do not have a prior master's degree in Geology. Impact on other units: None. Financial impact: None.

DEPARTMENT OF ENGLISH

ϕ **DROP CONCENTRATION – ENGLISH MAJOR, MA**

Writing concentration

In the 2019-20 Graduate Catalog, drop the Writing concentration. Also, under the English Major, MA,

1) revise the first paragraph as follows:

The MA in English has two concentrations: Literature, Criticism, and Textual Studies; and Rhetoric, Writing, and Linguistics.

Formerly: The MA in English has two concentrations: Literature, Criticism, and Textual Studies; and Rhetoric, Writing, and Linguistics. (The writing concentration is now the Creative Writing major for the MFA.)

2) delete last heading:

Writing Concentration (refer to the Creative Writing major, MFA

Rationale: The former MA writing concentration was replaced by the MFA degree in Creative Writing in 2014. All students previously enrolled in the MA writing concentration have graduated, so all references to the former concentration in the catalog need to be removed. Impact on other units: None. Financial impact: None.

DEPARTMENT OF MODERN FOREIGN LANGUAGES AND LITERATURES

REVISE GERMAN MAJOR MA, THESIS OPTION

In the 2019-20 Graduate Catalog, delete the first four sentences and replace with the following three sentences:

The minimum requirements are 24 credit hours of coursework and 6 credit hours of Thesis GERM 500. The 24 credit hours consist of courses on literature, culture, film, or language taught in the German program, only one of which may be chosen from GERM 411-412 or GERM 485; graduate courses in other programs may be counted with permission of the graduate advisor in German. Modern Foreign Languages and Literatures (MFLL) 512 is required for all students and may be taken only once.

Formerly: The minimum requirements are 24 credit hours of graduate course work and 6 credit hours of Thesis GERM 500. GERM 510 and GERM 519 are required, as are three courses on German literature or culture, one of which may be at the 400-level. Also, students must take three additional courses, only one of which may be chosen from GERM 411-GERM 412 or GERM 485. All graduate teaching assistants should take MFLL 512, and other candidates may take MFLL 512 or any other course above 500 in German.

REVISE GERMAN MAJOR MA, NON-THESIS OPTION

In the 2019-20 Graduate Catalog, delete the first four sentences and replace with the following three sentences:

Non-thesis is a course only option with a comprehensive exam. The minimum requirements are 30 credit hours of coursework, including at least one 600-level course for which a seminar paper is required. The 30 credit hours consist of courses on literature, culture, film, or language taught in the German program, only one of which may be chosen from 411-412 or 485; graduate courses in other programs may be counted with permission of the graduate advisor in German. Modern Foreign Languages and Literatures (MFLL) 512 is required for all students and may be taken only once.

Formerly: The minimum requirements are 30 credit hours of graduate course work, including at least one 600-level course for which a seminar paper is required. GERM 510 and GERM 519 are required, as are three courses on German literature or culture, one of which may be at the 400-level. Also, students must take three additional courses, only one of which may be chosen from GERM 411-GERM 412 or GERM 485. All graduate teaching assistants should take MFLL 512, and other candidates may take MFLL 512 or any other 500-level course in German.

Rationale: MFLL 512 is taught regularly and all our GTAs have to take the course. We propose that all students, regardless of their GTA assignments, take the class. Every German M.A. student benefits from training in Foreign Language teaching. This is a core class for the professional development of our students. Impact on other units: None. Financial impact: None.

REVISE SPANISH MAJOR, MA (THESIS AND NON-THESIS OPTIONS)

In the 2019-20 Graduate Catalog, delete the current text and requirements and replace with the following:

Thesis Option

- Completion of a minimum of 24 credit hours in graduate course work plus at least 6 credit hours in course SPAN 500 – Thesis. A maximum of 6 credit hours may be taken at the 400-level (for graduate credit); the rest at the 500-level; and under certain conditions, the student may take 600-level seminars. MFLL 512 is required for all students and may be taken only once.
- A thesis with a minimum of 6 credit hours in course SPAN 500.
- A written examination covering the course work and selected items from a master reading list.
- A final oral examination covering the thesis.

Non-Thesis Option

- Non-thesis is a course only option with a comprehensive exam. Completion of at least 30 credit hours of graduate course work with a maximum of 6 at the 400-level (taken for graduate credit) and the rest at the 500-level. Under certain conditions, the student may take 600-level seminars. MFLL 512 is required for all students and may be taken only once.
- A written examination covering the course work and selected items from a master reading list.

Formerly:
Thesis Option

- Completion of a minimum of 24 credit hours in graduate course work plus at least 6 hours in course SPAN 500 Thesis. A maximum of 6 credit hours may be taken at the 400-level (for graduate credit); the rest at the 500-level; and under certain conditions, the student may take 600-level seminars. If the student chooses to have a minor (such as Italian or Portuguese), at least 24 credit hours (including 6 credit hours of thesis) must be taken in the major and 6 credit hours in the minor.
- A thesis with a minimum of 6 credit hours in course SPAN 500.
- A written examination covering the course work and selected items from a master reading list.
- A final oral examination covering the thesis.

Non-Thesis Option

- Completion of at least 30 credit hours of graduate course work with a maximum of 6 at the 400-level (taken for graduate credit) and the rest at the 500-level. Under certain conditions, the student may take 600-level seminars. If the student chooses to have a minor (such as Italian or Portuguese), at least 24 credit hours must be taken in the major and 6 credit hours in the minor.
- Three term papers that have been accepted by the student's advisory committee.
- A written examination covering the course work and selected items from a master reading list.

Rationale: MFLL 512 is taught regularly and all our GTAs have to take this course. With this change, we propose that all students, regardless of their GTA assignments, take this class. Every MA Spanish student benefits from training in Foreign Language teaching. This is a core class for the professional development of our students.

The Spanish faculty agreed to remove the requirement to submit three term papers in non-thesis option. This is current practice. The faculty agreed to remove the minor option because 6 credit hours is not enough for a minor. Impact on other units: None. Financial impact: None.

SCHOOL OF MUSIC

REVISE MUSIC THEORY PEDAGOGY GRADUATE CERTIFICATE

In the 2019-20 Graduate Catalog, under the Program of Study heading, delete the current text and requirements and replace with the following:

Program of Study
The certificate program consists of 15 credit hours of graduate course work: 3 credit hours of analysis (MUTH 520 or MUTH 521), 3 credit hours of technology (MUTC 520, MUTC 530, MUTC 540 or MUTC 550), 4 credit hours of pedagogy (MUTH 530 or MUTH 531), 3 credit hours of theory and technology electives (MUTC 520, MUTC 530, MUTH 530 MUTH 531, MUTH 551, MUTH 593, MUTC 593), and 2 credit hours of the final teaching project (MUTH 595).

Formerly:
The certificate program consists of 15 credit hours of graduate course work: 3 credit hours of analysis (MUTH 520 or MUTH 521), 3 credit hours of technology (MUTC 540 or MUTC 550), 4 credit hours of pedagogy (MUTH 530 or MUTH 531), 3 credit hours of theory and technology electives (MUTH 530 MUTH 531, MUTH 551, MUTH 593, MUTC 593), and 2 credit hours of the final teaching project (MUTH 595).

Rationale: These two courses were recently added to the Graduate Catalog and should be utilized by our certificate program as technology options and electives. Impact on other units: None. Financial impact: None.

DEPARTMENT OF POLITICAL SCIENCE

REVISE GLOBAL SECURITY STUDIES GRADUATE CERTIFICATE

In the 2019-20 Graduate Catalog, add the paragraph below after the list of required courses.

Students may petition to have one alternative 3 credit hour course be substituted for one of the courses above. The course to be substituted must be a UTK graduate course (500 or 600-level) and clearly related to the content of the Global Security Studies certificate. The approval of this petition is at the discretion of the Department of Political Science, Director of Graduate Studies, to whom the petition should be made.

Rationale: Allows for a student to petition a clearly relevant class that is not currently listed for the certificate. Many relevant classes may be offered by faculty on an ad hoc basis. Impact on other units: None. Financial impact: None.

REVISE REQUIREMENTS – POLITICAL SCIENCE MAJOR, PHD

In the 2019-20 Graduate Catalog, under the Requirements heading, remove current text and replace with the following:

Requirements
Doctoral students admitted to the program must complete a minimum of 72 semester credit hours beyond the bachelor's degree, exclusive of credit for a master's thesis. These hours include 24 credit hours of Doctoral Research and Dissertation and a minimum of 48 semester credit hours in other courses graded A-F. Students also must pass a written comprehensive examination in two broad fields of political science (American government and politics; public administration; comparative government and politics; or international relations) and must pass a final oral examination on the dissertation.

In addition to the total credit hours required for the degree, the following requirements must also be met.

- At least 60 credit hours must be in political science courses.
- At least 60 credit hours in political science must be in courses numbered above 500.
- Completion of POLS 510, POLS 511 and POLS 513.

- Completion of at least three courses or seminars at the University of Tennessee, Knoxville, in each field in which the student takes the comprehensive examination.
- Completion of at least two courses or seminars at the University of Tennessee, Knoxville, in advanced methodology.
- A student may opt to take a minor in Methodology, which entails completing three courses or seminars at the University of Tennessee, Knoxville, in advanced methodology, and passing an exam. Students that undertake a minor in Methodology are not required to take a comprehensive exam in a second substantive field, unless they choose to do so.
- A student for whom a language other than English is necessary for their dissertation research may, with the approval of the Director of Graduate Studies, substitute demonstrated proficiency in that language for one of the advanced methods courses.
- At least 6 credit hours must be earned in political science courses numbered above 600.
- A total of 24 credit hours must be earned by writing the dissertation.

Formerly:
Doctoral students admitted to the program must complete a minimum of 72 semester hours beyond the bachelor's degree, exclusive of credit for a master's thesis. These hours include 24 hours of Doctoral Research and Dissertation and a minimum of 48 semester hours in other courses graded A-F. Students also must pass a written comprehensive examination in one broad field of political science (American government and politics; public administration; comparative government and politics; or international relations), must complete one cross-field concentration (in methodology, public policy, or political economy), and must pass a final oral examination on the dissertation.

Students undertaking a major field or dissertation in Comparative Politics are required to demonstrate a proficiency in a foreign language. However, this requirement may be waived by the Director of Graduate Studies in consultation with the Comparative politics faculty.

In addition to the total hours required for the degree, the following requirements must also be met.

- At least 60 hours must be in political science courses.
- At least 60 hours in political science must be in courses numbered above 500.
- Completion of POLS 510, POLS 511 and POLS 513.
- Completion of at least three courses or seminars at the University of Tennessee, Knoxville, in the field in which the students take the comprehensive examination.
- Completion of at least three courses or seminars at the University of Tennessee, Knoxville in each of two minor fields.
- At least 6 hours must be earned in political science courses numbered above 600.
- A total of 24 hours must be earned by writing the dissertation.

Rationale: The Department's 10-year program review recommended revising the requirements of the PhD program to increase class sizes and consolidate course offerings to reduce the number of courses offered. The revisions help achieve these goals by removing the cross-field concentration requirement and replacing it with a more traditional focus on a second substantive field. As such, the courses currently offered to satisfy the cross-field concentrations will no longer have to be offered every two years, and courses offered in the four fields of political science, some of which suffer from low enrollment, should observe increased enrollment. Impact on other units: None. Financial impact: None.

DEPARTMENT OF THEATRE

+ ADD CONCENTRATION – THEATRE MAJOR, MFA

Sound and Digital Media concentration

In the 2019-20 Graduate Catalog, add heading, text and requirements for the new concentration.

Sound and Digital Media Concentration
Required courses are THEA 503 in the first year of residence, 1 credit hour of THEA 491, 1 credit hour of THEA 492, 3 credit hours of THEA 475, 3 credit hours of THEA 473, and at least 12 credit hours of THEA 580.

Rationale: We have developed a sound and digital media program and have recruited a student who is currently fulfilling the program requirements. Both sound and digital media/projections are growing fields with higher than average industry employment rates. Digital Media, in particular is a faculty position many universities are currently adding to theatre, opera, and dance programs. Impact on other units: None. Financial impact: None.

HASLAM COLLEGE OF BUSINESS

All changes effective fall 2019

I. COURSE CHANGES

DEPARTMENT OF ACCOUNTING AND INFORMATION MANAGEMENT

(ACCT) Accounting

ADD

ACCT 504 – Analytics and Disruptive Technologies I (3) Focuses on foundational data analysis methodologies and disruptive information technologies relevant to business processes and financial and organizational decision-making. Cases, hands-on projects, and real-world activities are applied to enhance learning.
Comment(s): Or consent of instructor.
Registration Restriction(s): Master of Accountancy – accounting major.

Rationale: Business professionals are required to analyze ever increasing amounts of data to understand and report on business activities. Likewise, underlying systems that generate and store business process data and manage financial reporting are undergoing significant change, requiring new skills, knowledge, and understanding to use and assess. This course meets increasing needs in industry for accounting professionals who understand and interact with new data analysis methodologies and disruptive technologies that influence business processes and execution of procedures and financial decision making. Staffing impact: Current faculty already on staff are qualified to teach this course. No new hire is needed to field this course. Financial impact: None. Impact on other units: None.

REVISE TITLE AND DESCRIPTION AND ADD (RE) PREREQUISITE

ACCT 509 - Analytics and Disruptive Technologies II (3) Focuses on advanced data analysis methodologies and disruptive information technologies relevant to business processes and financial and organizational decision-making. Cases, hands-on projects, and real-world activities are applied to enhance learning.
(RE) Prerequisite(s): ACCT 504.

FORMERLY: ACCT 509 Financial Institutions (3)
Exposes students to various technology tools useful for analyzing financial data

Rationale: Name and description change to properly reflect broader course content that enables students to develop knowledge and skills in various analysis methodologies and the underlying technologies that are changing the nature and types of data relevant to financial reporting and decision making. Extends on content provided in ACCT 504. Staffing Impact: None. Financial Impact: None. Impact on other units: None.

REVISE TITLE AND DESCRIPTION

ACCT 522 - Valuation (3) Focus on business and asset valuation theory and application in financial reporting, investment, and taxation contexts.

FORMERLY: Valuation I (3)
Focus is on financial statement analysis, especially within the context of pricing the equity and debt interests of a business enterprise. Also encompasses basic valuation methods and techniques used to value such interests, as well as the Capital Asset Pricing Model.

Rationale: This change is based on a decision to consolidate valuation content in the MAcc. Staffing Impact: None. Financial Impact: None. Impact on other units: None.

(INMT) Information Management

REVISE TITLE AND DESCRIPTION

INMT 543 - Cybersecurity (3) Focuses on theories, technologies, and procedures underlying the protection of information assets. Students work with a variety of tools to enhance their knowledge and technology skills in this ever-changing area.

FORMERLY: INMT 543 - Systems Audit Security and Controls (3)
Discusses information systems security, auditing/assurance, planning, and control issues. The course examines security and control issues primarily at the operating system level.

Rationale: Name and description change to properly reflect broader course content that not only deals with security and controls, but also underlying technologies and IT infrastructure design that support new business models and information assets. Staffing Impact: None. Financial Impact: None. Impact on other units: None.

DEPARTMENT OF BUSINESS ANALYTICS AND STATISTICS

(BZAN) Business Analytics

REVISE TO DROP (RE) PREQUISITE AND REGISTRATION PERMISSION; AND ADD REGISTRATION RESTRICTION

BZAN 555 - Supply Chain Analytics (3)
Registration Restriction(s): Minimum student level – graduate.

Formerly:
(RE) Prerequisite(s): 535.
Registration Permission: Or permission of instructor.

Rationale: This course does not require the BZAN 535 content; this was initially added to control enrollments. BZAN 555 is now taken as an elective by MBA students and Industrial Engineering graduate students. These students have sufficient background for the course. Also, the registration restriction better meets the department's intent. Impact on staffing: None. Financial Impact: None. Impact on other units: It will make it easier for their students to register for this class.

DEPARTMENT OF MANAGEMENT

(MGT) Management

ADD

MGT 619 Micro Foundations of Entrepreneurship (3) Study of individuals and teams in entrepreneurship, focusing on micro level phenomenon, such as affect, identity, and failure. Reading of foundational theories in OB, psychology, and management, as well as their application to the entrepreneurship context.
Registration Restriction(s): Minimum student level – graduate.

Rationale: Replacing one course in strategy (MGT 624) with a course in entrepreneurship (MGT 619) to reflect the increasing focus on entrepreneurship in the Strategy, Entrepreneurship, and Organizations PhD program. Financial Impact: None – a replacement of one course for another. Staffing Impact: None – recently hired faculty will teach this course. Impact on other units: None – this course is not included in any other programs.

Equivalency Table	
Current Course	Equivalent Course - Effective Fall 2019
MGT 624	MGT 619

MGT 620 Seminar in Organization Theory (3) The primary objective of this course is to survey the major theoretical perspectives and issues studied in organization theory (OT) research. Will cover roughly 125 years of OT, from foundational theories, to classic theories of organization and a variety of emerging topics and perspectives.
Registration Restriction(s): Minimum student level – graduate.

Rationale: This new course is designed to build upon the organizations aspect of the Strategy, Entrepreneurship, and Organizations PhD program. Financial Impact: None – a recently hired faculty member will teach this course. Staffing Impact: None – recently hired faculty will teach this course. Impact on other units: None – this course is not included in any other programs.

MGT 610 Effective Academic Writing (3) A small, highly interactive seminar course intended to help you develop the writing skills and habits necessary to publish in the top journals. It is highly interactive, positive and developmental, so that you will increase in both your confidence and ability as a writer.
Registration Restriction(s): Minimum student level – graduate.

Rationale: This new course is designed to increase the writing ability of the students in the Strategy, Entrepreneurship, and Organizations PhD program. Financial Impact: None – a recently hired faculty member will teach this course. Staffing Impact: None – recently hired faculty will teach course. Impact on other units: None – this course is not included in any other programs. It is not intended to replace BUAD 540 - Academic Writing for Doctoral Students, and this new course is initially intended only for Strategy, Entrepreneurship, and Organizations PhD program students.

DROP

MGT 624 – Advanced Strategy I (3)

Rationale: Replacing one course in strategy (MGT 624) with a course in entrepreneurship (MGT 619) to reflect the increasing focus on entrepreneurship in the Strategy, Entrepreneurship, and Organizations PhD program. Financial Impact: None – a replacement of one course for another. Staffing Impact: None. Impact on other units: None – this course is not included in any other programs.

REVISE TITLE

MGT 618 - Overview of Entrepreneurship Research (3)

Formerly: MGT 618 - Overview of Entrepreneurial Research (3)

Rationale: Clean-up title to more accurately reflect the course content. Financial Impact: None. Staffing Impact: None. Impact on other units: None.

MGT 625 - Corporate Strategy: Theory and Methods (3)

Formerly: MGT 625 - Advanced Strategy II: Organizational and Strategic Processes (3)

Rationale: Clean-up of course title to more accurately reflect the course content. Financial Impact: None. Staffing Impact: None. Impact on other units: None.

II. PROGRAM CHANGES

DEPARTMENT OF ACCOUNTING AND INFORMATION MANAGEMENT

REVISE REQUIREMENTS, ACCOUNTING MAJOR, MACC

In the 2019-2020 Graduate Catalog, under the heading "Requirements" replace the program text for the concentration requirements as shown below:

Audit and Controls concentration
ACCT 504, ACCT 507, ACCT 508, ACCT 509, ACCT 518, ACCT 522, ACCT 535, ACCT 593, INMT 543, INMT 544.

Information Management concentration
ACCT 504, ACCT 507, ACCT 508, ACCT 509, ACCT 518, ACCT 593, INMT 540, INMT 543, INMT 544, INMT 548.

Taxation concentration
ACCT 504, ACCT 507, ACCT 508, ACCT 522, ACCT 530, ACCT 531, ACCT 532, ACCT 533, ACCT 539, ACCT 593.

Students may modify their program only with approval of the Director of the MAcc program.

Formerly:
Audit and Controls concentration
ACCT 507, ACCT 508, ACCT 509, ACCT 518, ACCT 522, ACCT 523, ACCT 535, ACCT 593, INMT 543, INMT 544.

Information Management concentration
ACCT 507, ACCT 508, ACCT 509, ACCT 518, ACCT 522 or ACCT 535, ACCT 593, INMT 540, INMT 543, INMT 544, INMT 548.

Taxation concentration
ACCT 507, ACCT 508, ACCT 509, ACCT 522 or ACCT 518, ACCT 530, ACCT 531, ACCT 532, ACCT 533, ACCT 539, ACCT 593.

Students may modify their program only with approval of the Director of the MAcc program.

Rationale: The former requirements section does not accurately reflect current course offerings and concentration structure. Staffing Impact: None. Financial Impact: None. Impact on other units: None.

DEPARTMENT OF BUSINESS ANALYTICS AND STATISTICS

ϕ **DROP CONCENTRATION – STATISTICS MAJOR, MS**

Industrial Statistics concentration

✚ **ADD CONCENTRATION**

Intercollegiate Graduate Statistics and Data Science concentration

REVISE REQUIREMENTS – INTERCOLLEGIATE GRADUATE STATISTICS AND DATA SCIENCE PROGRAM

In the 2019-2020 Graduate Catalog, add the requirements below to the catalog text:

Minimum course requirements: STAT 537 (or equivalent), STAT 538 (or equivalent), STAT 563, STAT 564, 3 credit hours of STAT level B coursework as described on IGSDSP website, 6 additional approved level B courses offered by UT units and listed on IGSDSP website.

Rationale: For clarification and to make the name consistent with the curricular requirements for the degree as currently offered. Staffing impact: None. Financial impact: None. Impact on other units: None.

DEPARTMENT OF MANAGEMENT

REVISE REQUIREMENTS – STRATEGY, ENTREPRENEURSHIP AND ORGANIZATIONS CONCENTRATION, BUSINESS ADMINISTRATION MAJOR, PHD

In the 2019-2020 Graduate Catalog, replace the sentence for the course requirements as shown below:

Minimum course requirements are MGT 617, MGT 618, MGT 619, MGT 620, MGT 623, and MGT 625.

Formerly: Minimum course requirements are MGT 617, MGT 618, MGT 623, MGT 624 and MGT 625.

Rationale: These changes to the Strategy, Entrepreneurship, and Organizations (SEO) PhD program minimum required courses reflect the addition of the new seminars listed above (MGT 619 and MGT 620) and the dropping of MGT 624. This change results in one additional seminar for SEO PhD students but does not increase the total number hours nor time needed for graduation. Financial Impact: None – all staffing is in place for new courses. Staffing Impact: None – all staffing is in place for new courses. Impact on other units: None –these changes only impact the SEO PhD program and students.

COLLEGE OF COMMUNICATION AND INFORMATION

All Changes Effective Fall 2019

I. COURSE CHANGES

SCHOOL OF ADVERTISING AND PUBLIC RELATIONS

✓ **ADD NEW ACADEMIC DISCIPLINE AND COURSES**

(ADPR) Advertising and Public Relations

ADPR 541 Strategic Communication Tactics (3) Provides an overview of the field for students with little to no formal strategic communication education or experience and equips them with the skills they need to excel. Students will learn how to use professional design and photo editing software as well as how to select typography, color, and images. They will also receive intensive training in writing for direct, online, and mediated communications. Students will produce multiple portfolio pieces that showcase their strategic communication skill set.
Registration Restriction(s): Minimum student level – graduate.
Instructional Methodology: Internet/Web Based/Online.

ADPR 542 Strategic Communication Management (3) Overview of leadership and management of goal-driven strategic communication in multiple contexts (e.g., for-profit, non-profit, agency). Examines theories and case studies to explore topics such as research and evaluation, issues management, message and channel strategies, project management, budgeting, and communication with multiple stakeholders. Emphasizes professional ethics and standards.
Registration Restriction(s): Minimum student level – graduate.
Instructional Methodology: Internet/Web Based/Online.

ADPR 562 Social Media Strategy and Tactics (3) Provides students with practical knowledge and analytical skills necessary to create, evaluate and execute social media campaigns. The course will include lectures, case studies, assignments and engaged activities that will help in the development of a strong social media skill set. Salesforce's Marketing Cloud Social Studio technology will be used for social listening assignments and provide a hands-on learning experience for enrolled students.
Registration Restriction(s): Minimum student level – graduate.
Instructional Methodology: Internet/Web Based/Online.

Rationale: The College, in partnership with all four Schools, is developing an online MS sequence to ideally start Fall 2020. A college-wide ad hoc committee was created with faculty among all four schools and market-based research was conducted to demonstrate the value of a new online graduate program. The associate dean's office also worked with two online course management companies regarding research and viability of such a program. Impact on other units: None. Financial impact: None.

COLLEGE OF COMMUNICATION AND INFORMATION

(CCI) Communication and Information

ADD

CCI 590 Project (1-6) Student-led project under faculty direction that applies concepts learned in prior classes to a communication management situation. Students are required to clearly define the project and the faculty member who will direct it prior to registering for the course. Students must have earned a minimum of 12 credit hours in the CCI master's program prior to registering for Project credit.
Repeatability: May be repeated. Maximum 6 hours.
Instructional Methodology: Internet/Web Based/Online.

CCI 592 Practicum (1-6) Professional learning while engaged in professional communication work. Students are required to clearly define expected learning outcomes at the start of the term. Credit hours earned will be based on hours worked at practicum site. Students will report periodically on professional development throughout the semester and a final written report will be required. Students must have earned a minimum of 12 credit hours in the CCI master's program prior to registering for Practicum credit.
Repeatability: May be repeated. Maximum 6 hours.
Instructional Methodology: Internet/Web Based/Online.

Rationale: The College, in partnership with all four Schools, is developing an online MS sequence to ideally start Fall 2020. A college-wide ad hoc committee was created with faculty among all four schools and market-based research was conducted to demonstrate the value of a new online graduate program. The associate dean's office also worked with two online course management companies regarding research and viability of such a program. Impact on other units: None. Financial impact: None.

SCHOOL OF INFORMATION SCIENCES

(INSC) Information Sciences

ADD

INSC 506 edTPA Seminar (1) Integrates foundational concepts of librarianship, including academic language and the discovery, use, and evaluation of information, into K-12 information literacy instruction and school library program administration. Preparation for the edTPA capstone experience.
Registration Permission: Restricted: open only to students required to complete the edTPA for school librarianship licensure and endorsement.

Rationale: New Tennessee State Department of Education requirements for school library track students mandate successful completion of the edTPA online portfolio, which emphasizes pedagogy as well as subject-specific content knowledge. This one-hour seminar will enhance integration of IS content into K-12 instruction and better prepare non-education majors for this pedagogy-based assessment. Impact on other units: None Financial impact: None

INSC 511 Information Concepts and Foundations (3) Required course. Introduction to foundational concepts and theories, principles, and models of Information Sciences, including information behavior. History and nature of the discipline. Information policy, and the role of information in society. Evolution and scope of the information professions and their central issues, values, and ethical frameworks.

INSC 512 Information Organization and Retrieval (3) Required course. Introduction to subject vocabularies and classification systems; theories and methods of information organization and retrieval, including approaches to evaluating information retrieval systems. Practical, ethical, and representational issues related to IR systems implementation.

Rationale (for INSC 511 and 512): The School of Information Sciences faculty is in the midst of a multi-year effort to revise its program structure and curriculum. These two courses update the required course content and reduce redundancy among the required course outcomes. Impact on other units: None. Financial impact: None.

INSC 514 Information Technology Foundations (3) Introduction to foundational concepts; theories, models, and frameworks for designing, adopting, learning, and using information technology (IT); analysis, evaluation and management of electronic tools and resources; trends, capabilities, and limitations of information technologies for accessing, managing, and applying information from service user and service provider perspectives in various information settings.

Rationale: This course will address the foundations of Information Technology as applied in LIS. Also, many MSIS students require education in foundational IT concepts and skills prior to progressing to electives. Impact on other units: None Financial impact: None

INSC 524 Metadata (3) Explores the role of metadata in our evolving information ecosystem(s) with an emphasis on metadata IN the digital environment. Development and use of metadata schemas in information communities, including digital libraries, museums, and archives; scientific data centers, and governmental organizations. Interoperability, metadata models, ontologies, metadata for the semantic web, metadata generation, metadata and search engines, metadata quality, and the evaluation of metadata schemas and tools. Enabling technologies used to create machine-understandable metadata (e.g., XML and RDF).
(DE) Prerequisite(s): 520 or 512.

Rationale: Metadata is an essential area of LIS and this course has been offered several times as a special topics course. Impact on other units: None. Financial impact: None.

INSC 538 User Instruction (3) Theory, strategy, design, and practice in providing instructional services and technology for end users of information and information systems. Includes practical experience.

Rationale: Over the past several years the School of Information Sciences faculty have tried to align course numbering with broad topics within the curriculum. The User Instruction course is more similar to courses in the 530 sequence than those in the 550 sequence, which deal with management and administration. Impact on other units: None. Financial impact: None.

INSC 558 Planning and Assessment (3) Overview of history of and issues related to planning and assessment in libraries and other information organizations, including approaches, methods, and tools.

Rationale: Planning and Assessment is a growing field in Library and Information Science. The course was taught as a special topics course in Fall 2018. Impact on other units: None. Financial impact: None.

INSC 586 Usability Testing and Evaluation (3) Comprehensive overview of theory and practice of usability evaluation. Assessing information systems from a user-centered design perspective using methods including usability testing, heuristic evaluation, web analytics, eye tracking and interaction modeling. Focus on usability testing and its various techniques including Think Aloud protocol, performance testing, face-to-face testing and remote testing.

Rationale: This course will introduce students to the concepts of usability testing, and provide a foundation for students interested in further study of usability, user design, and Human-Computer Interaction. Impact on other units: None Financial impact: None.

DROP

INSC 557 User Instruction (3)

Rationale: Over the past several years the School of Information Sciences faculty have tried to align course numbering with broad topics within the curriculum. We are dropping course INSC 557 and adding it back as INSC 538 as it is more similar to courses in the 530 sequence than those in the 550 sequence, which deal with management and administration. Impact on other units: None. Financial impact: None.

Equivalency Table	
Current Course	Equivalent Course - Effective Fall 2019
INSC 557	INSC 538

REVISE TITLE AND DESCRIPTION

INSC 531 Introduction to Information Sources and Services (3) Introduction to reference services in libraries and information centers, including the reference interview, service standards and guidelines, and general reference sources and source types.

Formerly: Sources and Services for the Social Sciences (3) Information sources in political science, sociology, psychology, geography, history, anthropology, business, and education. Scholarly communication of social scientists.

Rationale: Course is reimagined as a more general introduction to the field of reference and information sources & services. The content formerly covered in this course will be covered in INSC 533. Having the content of this new course at the beginning of the 530 sequence of courses will help students understand the logical progression of content. Impact on other units: N/A. Financial impact: None.

REVISE TITLE AND DESCRIPTION AND ADD RE/DE PREREQUISTE

INSC 533 Humanities and Social Sciences Sources, Services, and Scholarship (3) Information sources in history, philosophy, religion, classical studies, folklore, and mythology; anthropology, sociology, linguistics, and language; psychology, geography, political science, business, and economics; communication, information science, and education; fine arts, performing arts, and literature. Scholarly communication patterns of humanists and social scientists.
(DE) Prerequisite(s): 530 or 531.

Formerly: Sources and Services for the Humanities (3) Information sources in philosophy, religion, fine arts, performing arts, literature and language. Scholarly communication of humanists.

Rationale: The content of this course has been augmented to include material from INSC 531 Sources and Services for the Social Sciences. Impact on other units: None. Financial impact: None.

INSC 543 Spatial Data Management (3) Introduces the concepts related to spatial data management, including types of spatial data, spatial data discovery, data curation, and spatial dataset metadata creation. Issues related to research data management policies and related information services.

Formerly: Geospatial Information in Information Sciences (3) Introduces the concepts related to geographic information librarianship. To understand geographic/cartographic competencies. To master the basic concepts of geospatial data discovery and collection development of cartographic resources. To practice the metadata creation of geospatial. To explore issues related to geographic information policy of GIS related services.

Rationale: The new name and course description will match more specifically to the evolved content of the course and reflect the trend in jobs toward data management. Impact on other units: None. Financial Impact: None.

INSC 592 Introduction to Data Analytics and Visualization (3) Introduces the concepts of big data and data analytics in academics, businesses, sciences, the Web, etc. To master basic concepts and process of data analytics. To practice data mining techniques and skills (ETL). To design effective information visualizations.

Formerly: Big Data Analytics (3) Introduces the concepts big data and data analytics as an emerging field. To address the opportunities and challenges of big data in academics, businesses, sciences, the Web, etc. To understand the nature of big data analytics and their various contexts. To master basic concepts and process of data analytics. To design analytics initiatives/proposals. To practice data mining techniques and skills (ETL). To explore data modeling and visualizing.

Rationale: Reflects updated terminology in the field. Impact on other units: None. Financial impact: None.

REVISE TITLES

INSC 551 School Libraries (3)

Formerly: School Library Media Centers

INSC 595 Student Teaching in School Libraries (9)

Formerly: Student Teaching in School Library Information Centers

Rationale: Reflects updated terminology in the field. Impact on other units: None. Financial impact: None.

REVISE TITLE, CREDIT HOURS, AND DESCRIPTION

INSC 596 Field-Based Experience in School Libraries (1-2) Prescribed activities to gain competencies in a school library. Must be taken twice.

Formerly: Field-Based Experiences in School Library Information Centers (2 or 4) Prescribed activities to gain competencies in a school library information center setting. Must be taken twice.

Rationale: Changes in Tennessee State Department of Education requirements for internship experiences for licensed teachers, and adjustments to the Job Embedded Program for newly hired school librarians without teaching licenses. The name change reflects current terminology in the field. Impact on other units: None Financial impact: None

SCHOOL OF JOURNALISM AND ELECTRONIC MEDIA

ADD

JREM 513 Audience Analytics (3) Provides an overview of the main theoretical frameworks and measures used to understand audience preferences and behaviors in relation to traditional forms of media. Students will learn and apply analytic tools to track and analyze audience visits to media-related websites and social media activity. Insight will be provided on factors driving engagement with sites. Implications in terms of audience diversity and inclusion will also be covered.
Credit Level Restriction: Graduate credit only.
Registration Restriction(s): Minimum student level – graduate.
Instructional Methodology: Internet/Web Based/Online.

JREM 516 Digital Content Creation Basics (3) Introduces students with limited media writing background to the basics of writing and producing of content across media platforms and for varied disciplines, including journalism, public relations and advertising. Skills include basics of style, concise and informative writing, information gathering including effective interviewing practice, and adapting material for audiences that read, listen or watch. Conceptual topics include professionalism and ethics.
Credit Level Restriction: Graduate credit only.
Registration Restriction(s): Minimum student level – graduate.
Instructional Methodology: Internet/Web Based/Online.

JREM 557 Global Communications (3) Explores and analyzes distinct and/or overlapping attributes of media culture and systems in select regions of the world. It prepares students to effectively work and communicate in a global media environment. Within the framework of free expression/freedom of the press, the course also explores how ordinary individuals via social media platforms are now distributors of cultural expressions and contributors of media content.
Credit Level Restriction: Graduate credit only.
Registration Restriction(s): Minimum student level – graduate.
Instructional Methodology: Internet/Web Based/Online.

Rationale: The College, in partnership with all four Schools, is developing an online MS sequence to ideally start Fall 2020. A college-wide ad hoc committee was created with faculty among all four schools and market-based research was conducted to demonstrate the value of a new online graduate program. The associate dean's office also worked with two online course management companies regarding research and viability of such a program. Impact on other units: None. Financial impact: None.

II.. PROGRAM CHANGES

REVISE ACADEMIC STANDARDS AND ACADEMIC PROBATION REQUIREMENTS ON THE COLLEGE INTRODUCTORY PAGE

In the 2019-2020 Graduate Catalog, under the heading, "Academic Standards and Academic Probation" add the following two sentences as last sentences to the existing paragraph.

> A student who earns less than a grade of C in a required course will have his/her program terminated. A graduate student cannot repeat a course.

The paragraph will now read as follows:

Academic Standards and Academic Probation
A student in the College of Communication and Information whose graduate grade point average is below 3.0 after the end of 9 credit hours of graduate credit will be placed on academic probation. A student will be allowed to continue graduate study in subsequent semesters if each semester's grade point average is 3.0 or greater. Upon achieving a cumulative GPA of 3.0, the student will be removed from probationary status. A student must achieve a cumulative GPA of 3.0 in order to graduate. A student who earns less than a grade of C in a required course will have his/her program terminated. A graduate student cannot repeat a course.

REVISE ADMISSION REQUIREMENT – COMMUNICATION AND INFORMATION MAJOR, MS

In the 2019-2020 Graduate Catalog, under Admission heading, delete text in the 5th bullet and replace with the following.

- The University of Tennessee, Knoxville, requires all who teach to be competent in spoken English. The specific policy, as it relates to graduate students who teach, is as follows: "Since a certain level of competency with English as a spoken language is necessary for effective communication and teaching, all Graduate Teaching Assistants and Graduate Teaching Associates whose first language is not English are required to demonstrate an appropriate level of comprehensibility for classroom teaching by taking the Oral Proficiency Interview by computer (OPIc) administered through the Graduate School. Students need to consult the ITA-OPIc website for more specific details on the ITA-OPIc, including test dates at https://gradschool.utk.edu/graduate-student-life/ita-testing-program/.

Formerly: For students whose native language is not English and who have not earned an earlier degree at an American college or university in the past two years, the Test of English as a Foreign Language is required. The test must have been taken within the past two years. Students should show mastery of the English language.

REVISE ADMISSION REQUIREMENT – COMMUNICATION AND INFORMATION MAJOR, PHD

In the 2019-2020 Graduate Catalog, under the Admission heading, delete text in the 5th bullet and replace with the following.

- The University of Tennessee, Knoxville, requires all who teach to be competent in spoken English. The specific policy, as it relates to graduate students who teach, is as follows: "Since a certain level of competency with English as a spoken language is necessary for effective communication and teaching, all Graduate Teaching Assistants and Graduate Teaching Associates whose first language is not English are required to demonstrate an appropriate level of comprehensibility for classroom teaching by taking the Oral Proficiency Interview by computer (OPIc) administered through the Graduate School. Students need to consult the ITA-OPIc website for more specific details on the ITA-OPIc, including test dates at https://gradschool.utk.edu/graduate-student-life/ita-testing-program/.

Formerly: For students whose native language is not English and who have not earned an earlier degree at an American college or university in the past two years, the Test of English as a Foreign Language is required. The test must have been taken within the past two years. Students should show mastery of the English language.

SCHOOL OF COMMUNICATION STUDIES

REVISE REQUIREMENTS – COMMUNICATION AND INFORMATION MAJOR, MS (COMMUNICATION STUDIES CONCENTRATION)

In the 2019-2020 Graduate Catalog, add heading and text for the requirements for the Communication Studies concentration for the Communication and Information Major, MS.

Communication and Information Major, MS
Communication Studies concentration

Core courses (16 credit hours)

CCI 501	(1)
CMST 680	(3)
CMST 508	(3)
CMST 509	(3)
CMST 520	(3)
CMST 550	(3)

Concentration courses (9 credit hours)
Take three graduate-level Communication Studies (CMST) courses to make a cohesive substantive concentration.
CMST (3 credit hours)
CMST (3 credit hours)
CMST (3 credit hours)

Elective courses (3-6 credit hours)
Take one to two graduate courses from a unit other than Communication Studies (CMST) that enrich the substantive concentration. Project students take 6 credit hours. Thesis students take 3 credit hours.

Elective course (3 credit hours)
Elective course (3 credit hours)

Capstone Experience (3-6 credit hours)
CMST 590 / Project (3 credit hours)
OR
CMST 500 / Thesis (6 credit hours)

Total course credit hours must not be less than 34.

Formerly:
Core (7 hours)
CCI 501 (Orientation, 1 hour), CCI 540 (Theory, 3 hours), and a research methods course (ADVT 530, INSC 504, or JREM 512) to be taken during the first two semesters of the student's program, except with the written approval of the Associate Dean for Academic Programs of the college.

Concentration (15 hours)
Concentrations are typically housed within one of the academic units. Students may also construct their own coherent set of courses for a concentration with the approval of the Associate Dean for Academic Programs for the college. At least 6 hours of the concentration must be at the 500 level or above.

Approved Electives
Six hours of electives for students in the thesis option. Nine hours of electives for students in the non-thesis option.

Thesis or Project
Six hours of thesis work or a 3-hour project.

Other Requirements
All students must take courses from at least two of the schools in the College of Communication and Information.
The final comprehensive exam will include a written project and an oral defense of it.

SCHOOL OF INFORMATION SCIENCES

REVISE SCHOOL INTRODUCTORY TEXT

In the 2019-2020 Graduate Catalog, remove current introductory text and replace with the following:

The School of Information Sciences provides a program leading to the preparation of librarians and information professionals for work in all types of libraries and information centers. The program of study includes a graduate curriculum leading to the Master of Science degree, accredited by the American Library Association (ALA). The School of Information Sciences also participates in the CCI interdisciplinary doctoral program.

Admission
Applicants with a final undergraduate grade point average (GPA) of 3.25 will be considered for admission to the MS program.

International applicants are required to take the Test of English as a Foreign Language (TOEFL).

Formerly:
The School of Information Sciences provides a program leading to the preparation of librarians and information professionals for work in all types of libraries and information centers. The program of study includes a graduate curriculum leading to the Master of Science degree. The program is accredited by the American Library Association. The School of Information Sciences also participates in the interdisciplinary doctoral program.

Admission
Applicants with a final undergraduate grade point average (GPA) of 3.25 will be considered for admission to the MS program.
Foreign applicants are required to take the Test of English as a Foreign Language.

REVISE REQUIREMENTS – INFORMATION SCIENCES MAJOR, MS

In the 2019-2020 Graduate Catalog, under the Requirements heading, remove current text and replace with the following:

Requirements
The School of Information Sciences offers an American Library Association (ALA)-Accredited Master of Science degree with a major in Information Sciences (MSIS). Its requirements are as follows:

The Master of Science degree with a major in Information Sciences (MSIS) requires 36 graduate course credit hours.

- All MSIS students are required to complete and earn a grade of C or better in three graduate courses: INSC 511, INSC 512, and INSC 514.
- These courses are prerequisites to all courses for students enrolled in the MS program
- Students must take at least 27 credit hours in the School of Information Sciences curriculum (i.e., courses designated “INSC”).
- Students may take up to 9 credit hours outside of the School.
- Up to 6 of these credits may be graduate credits from outside the College of Communication and Information and/or the University of Tennessee.
- Students who have earned graduate credits (at the University of Tennessee or another institution) but not applied them to the requirements of another degree at UTK or elsewhere, may submit a request to have up to 6 of those credits applied to the MSIS 36 credit hour requirement.
- Students seeking School Librarian licensure have additional requirements, listed below.

The faculty regards the following courses as important to professional success – INSC 504, INSC 550, INSC 560. These courses address research, management and leadership in information organizations, and the concepts of developing and managing collections.

NOTE: Effective fall 2019, the program eliminated the previous required courses of INSC 510, INSC 520, and INSC 530 and replaced them with INSC 511, INSC 512, and INSC 514. Each Admission to Candidacy Application will be reviewed on an individual basis to confirm all requirements for the program have been met. Consult with your advisor for clarification.

Tennessee State Department of Education School Library Media Specialist Requirements
The Tennessee State Department of Education requires School Library Media Specialists to hold the master's degree. The School of Information Sciences offers four options for the School Library Media Specialist Endorsement.

Requirement information specific to course of study to receive MSIS
With: Tennessee State Department of Education teaching license, and PreK-12 School Library Endorsement

- Brief Description: MSIS, K12 Licensure, and School Library Endorsement
- Credit Hours Required: 37 credit hours required for Masters, 6 additional credit hours required for License and Endorsement
- Required Courses (graduate credit hours in parentheses):
    - INSC 506 (1) (Concurrent with INSC 595, 9 hours)
    - INSC 511 (3)
    - INSC 512 (3)
    - INSC 514 (3)
    - INSC 551 (3)
    - INSC 560 (3)
    - INSC 571 (3)
    - INSC 572 (3)
    - INSC 595 (9)
    - Elective (6)
- Additional Course Requirements:
    - Students must complete two co-requisite courses from the College of Education, Health, and Human Sciences (6 credit hours) that do not count toward the master's degree requirements.
        - EDPY 401 (3)
        - SPED 402 (3)
- Non-course Requirements:
    - Students pursuing the initial endorsement must complete the edTPA.
- Additional Information: Students accepted into the CEHHS Job-Embedded Program (JEP) should consult with the School Library Program Coordinator about practicum requirements.

Requirement information specific to course of study to receive MSIS
With: PreK-12 School Library Endorsement for Students holding a teaching license.

- Brief Description: MSIS and School Library Endorsement
- Credit Hours Required: 37 credit hours
- Required Courses:
    - INSC 511 (3)
    - INSC 512 (3)
    - INSC 514 (3)
    - INSC 551 (3)
    - INSC 571 (3)
    - INSC 572 (3)
    - INSC 596* (must be taken twice, 4 credit hours)
    - Electives (15)
        - Upon approval of faculty advisor
- Additional Course Requirements:
    - The number of satisfactory/no credit courses/grades in a student's program is limited to one-fourth of the total credit hours required (9 of 36).
- Non-course Requirements:

Requirement information specific to course of study to receive MSIS
With: PreK-12 School Library Endorsement for Students holding a Tennessee teaching license and Master's Degree other than American Library Association-Accredited Master's (unknown type of thesis/non-thesis)

- Brief Description: MSIS and Endorsement
- Credit Hours Required: 37 credit hours
- Required Courses:
    - INSC 511 (3)

    - INSC 512 (3)
    - INSC 514 (3)
    - INSC 551 (3)
    - INSC 571 (3)
    - INSC 572 (3)
    - INSC 596* (must be taken twice, 4 credit hours)
    - Electives (15)
        - Upon approval of faculty advisor
- Additional Course Requirements:
    - The number of satisfactory/no credit courses/grades in a student's program is limited to one-fourth of the total credit hours required (9 of 36).
- Non-course Requirements:

Requirement information specific to course of study to receive MSIS
With: PreK-12 School Library Endorsement and Tennessee State Department of Education teaching license for students with an American Library Association (ALA)-Accredited Master's Degree.

- Brief Description: For those students who hold an ALA-accredited master's degree and have approval of the faculty advisor. Upon completion of the requirements, students earn a Tennessee State Department of Education teaching license and PreK-12 School Library Media Endorsement.
- Credit Hours Required: 31 credit hours
- Required Courses:
    - INSC 506 (Concurrent with INSC 595) (1)
    - INSC 514 (3)
    - INSC 551 (3)
    - INSC 560 (3)
    - INSC 571 (3)
    - INSC 572 (3)
    - INSC 595 (9)
    - Electives (6)
- Additional Course Requirements:
    - Students must complete two co-requisite courses from the College of Education, Health, and Human Sciences (6 credit hours) that do not count toward the master's degree requirements.
        - EDPY 401
        - SPED 402
- Non-course Requirements:
    - Students pursuing the initial PreK-12 School Library Endorsement must complete the edTPA.

Additional Information: Students accepted into the CEHHS Job-Embedded Program (JEP) should consult with the School Library Coordinator.

Additional Requirement - Student Learning Collection

- In the final semester of the MSIS program, students must complete an MSIS Student Learning Collection (SLC) as part of the graduation process. To complete the SLC, students must identify products completed during the MSIS program that demonstrate mastery of specific MSIS. Program Learning Outcomes.
- The SLC is not graded, but is required as part of the graduation paperwork process.

Additional Requirement - Student Exit Survey

- Students are required to complete an exit survey to assess their achievement of learning outcomes and program experience.
- The exit survey is not graded, but is required as part of the graduation paperwork process.

Individualized Curriculum Approach
Students, in consultation with their advisor, are encouraged to develop an individualized program of study. To facilitate program planning, SIS faculty have created "career pathways" for a number of the information professions. Graduates of the school have prepared themselves for a variety of careers, including positions as corporate information specialist, public librarian, records manager/archivist, science information specialist, webpage designer, indexer/abstractor, online information retrieval specialist, medical or law librarian, reference librarian, youth services specialist, and many others. Students are encouraged to take advantage of the individualized curricular approach.

Additional Information – Thesis
While not required to complete a culminating experience, interested students may complete a thesis under close supervision of a thesis committee, comprised of a primary advisor and two additional faculty members.

- Students writing a thesis must complete 6 credit hours of INSC 500 - Thesis within the 36 credit hours required for graduation.
- Students must be registered for INSC 500 in the semester they complete and defend their thesis.
- Students may only register for 3 credit hours of 500 in the final semester.

Formerly:
Requirements
All students are required to complete and pass three graduate courses: INSC 510, INSC 520, INSC 530. (Students seeking licensure see track requirements below.) These courses address the evolving information environment, organization and representation of information, and information access and retrieval. The courses INSC 510, INSC 520, and INSC 530are prerequisites to all courses for students enrolled in the MS program.

All students are also required to complete one of three culminating experience options. There are two non-thesis options, a comprehensive exam or an ePortfolio, or a thesis option with a minimum of 6 credit hours of INSC 500.

The faculty regards the following courses as vital to professional success – INSC 504, INSC 550, INSC 560. These courses address research, management and leadership in information organizations, and the concepts of developing and managing collections.

Individualized Curriculum Approach
Students, in consultation with their advisor, may wish to pursue a curricular focus, or pathway, to develop an individualized program of study. Graduates of the school have prepared themselves for a variety of careers, including positions as corporate information specialist, public librarian, records manager/archivist, science information specialist, webpage designer, indexer/abstractor, online information retrieval specialist, medical or law librarian, reference librarian, youth services specialist, and many others. Students are encouraged to take advantage of the individualized curricular approach.

Whatever individualized curriculum is chosen, all students who complete the program receive a MS accredited by the American Library Association (ALA).

For those pursuing Tennessee Department of Education licensure as a school library media specialist, stipulated requirements apply. See the following section.

Tennessee State Department of Education School Library Media Specialist Requirements
The Tennessee State Department of Education requires School Library Media Specialists to hold the master's degree. The School of Information Sciences offers four tracks for school library media specialist endorsement.

Initial Endorsement for Non-Licensed Teachers with no Master's Degree in Library or Information Sciences
For those students who do not have the master's degree, the requirements for initial endorsement include the three required courses plus INSC 551, INSC 560, INSC 571, INSC 572, INSC 573, INSC 580, INSC 581, INSC 595 and 1 elective (upon approval of faculty advisor). In addition, students must complete two co-requisite courses from the College of Education, Health, and Human Sciences (6 credit hours) that do not count toward the master's degree requirements. These courses are EDPY 401 and SPED 402. Students pursuing the initial endorsement must follow the non-thesis option. Upon completion of the requirements, students earn a master's degree in information sciences and a Tennessee State Department of Education license as a School Library Media Specialist.

Initial Endorsement for Non-Licensed Teachers with a Master's Degree in Library or Information Sciences
For those students who hold an ALA-accredited master's degree and have approval of the faculty advisor, the requirements are a maximum of 24 credit hours within the school's program, including the required INSC 595. In addition, students must complete two co-requisite courses (EDPY 401 and SPED 402) from the College of Education, Health, and Human Sciences (6 credit hours) beyond the required 24 credit hours. Upon completion of the requirements, students earn a Tennessee State Department of Education license as a School Library Media Specialist.

Additional Endorsement for Licensed Teachers without a Master's Degree
The requirements include the three required courses plus INSC 551, INSC 571, INSC 572, INSC 580, INSC 581 and INSC 596 (which must be taken twice) plus 5 electives (upon approval of the faculty advisor). Upon completion of the requirements, students will earn a master's degree in Information Sciences and a Tennessee State Department of Education additional endorsement as a School Library Media Specialist.

Additional Requirements - Thesis Option
Students electing the thesis option will write a master's thesis under close supervision of a thesis committee. Six credit hours of INSC 500 - Thesis must be taken within the 36 credit hours required for graduation. (Students may register for more than 6 credit hours of INSC 500, but only 6 credit hours will count toward degree requirements.) Students must be registered for INSC 500 in the semester they complete and defend their thesis. The oral defense of the thesis (final comprehensive examination) substitutes for the written examination that is taken by non-thesis students. The writing of the master's thesis serves as the culminating experience.

Additional Requirements – Non-Thesis Options

Non-Thesis Option – Comprehensive exam

Upon completion of the program, students may elect the non-thesis option of taking and passing a written comprehensive examination. Students may take no more than a total of 12 credit hours from INSC 591, INSC 594, INSC 599. The number of satisfactory/no credit courses/grades in a student's program is limited to one-fourth of the total credit hours required (9 of 36).

Non-Thesis Option – ePortfolio
Near the start of the program, students may elect the non-thesis option of building and defending an ePortfolio (more information available at https://www.sis.utk.edu/programs/eportfolio). Students may take no more than a total of 12 credit hours from INSC 591, INSC 594, INSC 599. The number of satisfactory/no credit courses/grades in a student's program is limited to one-fourth of the total credit hours required (9 of 36).

REVISE REQUIREMENTS – CERTIFICATE IN YOUTH INFORMATICS

In the 2019-2020 Graduate Catalog, under the Requirements heading, remove current text and replace with the following:

Youth Informatics Graduate Certificate
The Youth Informatics Certificate (YIC) will enable students to develop knowledge of how youth up to age 21 use and apply technology in diverse settings. Informatics is the science concerned with gathering, manipulating, storing, retrieving, and classifying recorded information using Information and Communication Technology (ICT). Youth informatics is an interdisciplinary area of study that focuses on how people transform technology, and how information technology transforms people. This certificate is designed to provide a supplementary perspective for students already enrolled in graduate programs, and to provide enrichment for members of the community who have a graduate degree, and who wish to gain knowledge of or expand their role in youth services. The 12-credit hour certificate is earned by completing the four three-credit hour courses: INSC 542, INSC 583, INSC 593; and CFS 515 or PSYC 511, or an equivalent course, as approved by the YIC Coordinator.

Admission
Interested applicants must be currently admitted in a degree program at UTK or can apply directly for the Youth Informatics Certificate through the Graduate Admissions Office.

Requirements
The Youth Informatics Certificate requires 12 graduate credit hours and may be earned by completing the following:

- Students earning the YIC and another graduate degree simultaneously must complete at least three credit hours in addition to those required for the other graduate degree. For example, students completing the YIC and MSIS, which requires 36 credit hours, must complete at least 39 total credit hours to earn both credentials.
- SIS masters students: the 12 credit hour YIC may be earned by completing INSC 542, INSC 583, INSC 593; and CFS 515 or PSYC 511, or an equivalent course, as approved by the Coordinator of Youth Informatics.
- Other masters students must be approved by the SIS Coordinator of Youth Informatics prior to enrolling in Youth Informatics courses.
- Practitioners with a masters' degree must be approved by the SIS Coordinator of Youth Informatics prior to enrolling in Youth Informatics courses.
- CCI doctoral students: the 12 credit hour certificate may be earned by completing INSC 593; and CFS 515 or PSYC 511, or an equivalent course, as approved by the Coordinator of Youth Informatics.
- Other doctoral students must be approved by the SIS Coordinator of Youth Informatics prior to enrolling in Youth Informatics courses.
- Practitioners with a doctoral degree must be approved by the SIS Coordinator of Youth Informatics prior to enrolling in Youth Informatics courses.

Rationale:

This change brings the YIC description in line with the Graduate School's policy regarding credit requirements for certificate programs. Content of the previously-required course ALEC 510 changed significantly and is no longer appropriate for the YIC. PSYC 511 and CFS 515 are better options. Impact on other units: None. Financial impact: None.

Formerly:
The graduate certificate in Youth Informatics will enable students to develop knowledge of how youth up to age 21 use and apply technology in diverse settings. Informatics is the science concerned with gathering, manipulating, storing, retrieving, and classifying recorded information using Information and Communication Technology (ICT). Youth informatics is an interdisciplinary area of study that focuses on how people transform technology, and how information technology transforms people. This certificate is designed to provide a supplementary perspective for students already enrolled in graduate programs, and to provide enrichment for members of the community who have a graduate degree, and who wish to gain knowledge of or expand their role in youth services. The 12-credit hour certificate is earned by completing the four three-credit hour courses: INSC 542, INSC 583, INSC 593, and ALEC 510.

Admission
Interested applicants must be currently admitted in a degree program at UTK or can apply directly for the Youth Informatics Certificate through the Graduate Admissions Office.

Requirements
The Certificate in Youth Informatics requires 12 graduate credit hours and may be earned by completing the following:

SIS masters' students: the 12 credit hour certificate may be earned by completing INSC 542, INSC 583, INSC 593, and ALEC 510.

Other masters' students must be approved by the SIS Coordinator of Youth Informatics, Dr. Dania Bilal, prior to enrolling in Youth Informatics courses.

Practitioners with a masters' degree must be approved by the SIS Coordinator of Youth Informatics, Dr. Dania Bilal, prior to enrolling in Youth Informatics courses.

CCI doctoral students: the 12 credit hour certificate may be earned by completing INSC 542, INSC 583, INSC 593, and ALEC 510.

Other doctoral students must be approved by the SIS Coordinator of Youth Informatics, Dr. Dania Bilal, prior to enrolling in Youth Informatics courses.

Practitioners with a doctoral degree must be approved by the SIS Coordinator of Youth Informatics, Dr. Dania Bilal, prior to enrolling in Youth Informatics courses.

COLLEGE OF EDUCATION, HEALTH, AND HUMAN SCIENCES

All Changes Effective Fall 2019

I. COURSE CHANGES

DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

Student Learner Outcomes
(EDAM) EDUCATIONAL ADMINISTRATION

MS Degree in Educational Administration
1. Students will illustrate mastery of the core knowledge of the Pre-K-12 school leadership field, as guided by the professional standards.
2. Students will demonstrate the skills and dispositions required for Pre-K-12 school leadership licensing.

EdS Degree in Education
1. Students will illustrate mastery of the core knowledge of the Pre-K-12 school leadership field, as guided by the professional standards.
2. Students will demonstrate the skills and dispositions required for Pre-K-12 school leadership licensing.
3. Students will produce independent action research, located in a school setting, demonstrating the ability to design research studies, collect and analyze data, and communicate findings

PhD Degree in Education with a concentration in Leadership Studies
1. As student matriculates through program, student will design and present original research at national and/or regional venue and publish at least one scholarly article.
2. Students will propose independent research, demonstrating the ability to design and defend research proposals.

(ELPS) EDUCATIONAL LEADERSHIP AND POLICY STUDIES

MS Degree in Educational Administration
1. Students will illustrate mastery of the core knowledge of the Pre-K-12 school leadership field, as guided by the professional standards.
2. Students will demonstrate the skills and dispositions required for Pre-K-12 school leadership licensing.

EdS Degree in Education
1. Students will illustrate mastery of the core knowledge of the Pre-K-12 school leadership field, as guided by the professional standards.
2. Students will demonstrate the skills and dispositions required for Pre-K-12 school leadership licensing.
3. Students will produce independent action research, located in a school setting, demonstrating the ability to design research studies, collect and analyze data, and communicate findings

PhD Degree in Education with a concentration in Leadership Studies
1. As student matriculates through program, student will design and present original research at national and/or regional venue and publish at least one scholarly article.
2. Students will propose independent research, demonstrating the ability to design and defend research proposals.

(EDAM) EDUCATIONAL ADMINISTRATION

ADD

EDAM 521 Statistics for Educators (3) Designed to serve as an introduction course to gain an understanding of basic statistical procedures typically used in educational research. Students will explore the basic research procedures and statistical approaches involved in research projects. Will mainly focus on the quantitative approach in educational research.

Rationale: This course is currently taught as a special topics elective, with robust interest and enrollment. Because this course is part of the curriculum required for the EdS students, we propose to make this a permanent course option. Impact on Other Units: Adding this course does not impact other units. The proposed course does not alter courses required by other programs. Financial Impact: This change will not impact the college or department budget. Existing faculty will teach the course.

EDAM 530 Research Methods (3) Introduces the core concepts and applications of research design and methods. Students will explore the basic research procedures and statistical approaches involved in research projects. Areas of emphasis include locating, interpreting, critiquing, and writing about research in the field.

Rationale: This course is currently taught as a special topics elective, with robust interest and enrollment. Because this course is part of the curriculum required for the EdS students, we propose to make this a permanent course option. Impact on Other Units: Adding this course does not impact other units. The proposed course does not alter courses required by other programs. Financial Impact: This change will not impact the college or department budget. Existing faculty will teach the course.

REVISE DESCRIPTION

EDAM 513 Administrative and Organizational Theory (3) Provides an introduction to theoretical, administrative, and organizational foundations of management and leadership of educational programs. Organizations are approached from the perspective of Bolman and Deal's four frames; that is, structural, human resources, political and symbolic.

Formerly: Introduction to theoretical administrative and organizational foundations of management and leadership of educational programs and institutions.

EDAM 515 Human Relations and Communication in Administration (3) Develops the students' understanding of self, understanding of self in relation to others, and knowledge of organizational behavior. The focus is on the development of self-understanding as a basis of leadership as an art, the appreciation of others' unique strengths as a foundation of collaboration and goal accomplishment, and the enhancement of the dispositions, knowledge, and performance skills necessary for realization of both organizational and individual purpose.

Formerly: Development and use of effective interpersonal communication skills and channels, inter-group relations, supportive work climates, personnel motivation, conflict management skills, and role of values, attitudes, and expectations in administration.

EDAM 519 Curriculum for School Leaders (3) Looks at the role of the administrator as the instructional leader specifically as it relates to their knowledge of reform initiatives, best practice and instructional strategies, and as professional development facilitator. Approaches the process of leadership through the lens of curriculum and instruction. Specifically, students will gain a knowledge and understanding of the alignment of curriculum, instruction, and assessment. Students will gain an understanding of the newest reform initiatives in curriculum as well as their role as administrators in these initiatives. Students will learn to sustain a school mission, vision, and goals. A focus on the administrator's role in analyzing the professional development needs in the school as well as implementing appropriate professional development based on those school needs will be examined.

Formerly: Designed to equip aspiring school leaders with practical and theoretical knowledge of various curriculum models that might be used to foster instructional leadership and enhance school improvement initiatives. Seminars, lectures, and inquiry-based approaches will be used.

EDAM 520 Using Data for School Improvement (3) Using Data for School Improvement is an introduction to the uses of disciplined inquiry as a tool for planning, problem solving, decision-making, program improvement, and communicating in school and school-related contexts. Goal of this course is to provide students with the quantitative and qualitative techniques that are needed to engage in the process of school improvement planning through the use of empirical data.

Formerly: Data-based decision- making is an introduction to the uses of disciplined inquiry as a tool for planning, problem solving, decision-making, program improvement, and communicating in school and school-related contexts. The goal of this course is to provide students with the quantitative and qualitative techniques that are needed to engage in the process of school improvement planning through the use of empirical data.

EDAM 523 Administration of Special Services (3) The design of the course is to acquaint future school leaders with a comprehensive view of non-academic services available in schools to meet the unique needs of all students. These services provide those components that support educating students from a holistic perspective. Specifically, the course will consider the function of the administrator as it becomes necessary to integrate all vital services that enhance academic instruction. Students will explore their values as they relate to balancing attention to services that indirectly support positive outcomes for student learning.

Formerly: Legal, programmatic, and ethical responsibilities of educational administrators in design and implementation of special service programs within school settings. Special learner characteristics, program categories, service delivery models, and legal/ethical frameworks. Inclusion and full service delivery.

EDAM 544 School Finance and Business Management (3) Provides a significant grounding in education resource management theory and practice, so as to allow students to acquire a working knowledge of the context of school finance at the national, state and local levels, and understand the strategies and mechanics of school resource utilization that are most closely associated with increased student academic success.

Formerly: For prospective building level administrators. Financial and logical management tasks and procedures in individual school setting.

EDAM 548 Supervision and Personnel Administration (3) Designed to offer future K-12 educational leaders and scholars a broad and engaging background in the theoretical and pragmatic aspects of personnel supervision and evaluation. Course topics will be covered in light of significant, recent developments in the teacher evaluation and supervision field in Tennessee and the nation. The course will be broken into 3 modules: Developing staff, supervision of personnel, and the evaluation of personnel.

Formerly: Basic supervisory and personnel concepts and related competencies at the micro-organizational level: interviewing, personnel planning, collecting and maintaining employee information, supervision of personnel, performance appraisal and staff development.

EDAM 552 Educational Change for School Leaders (3) Will assist aspiring leaders in developing strategies for implementing change in school settings. Will include emphasis on creating conditions for change as well as planning, implementing, and managing change through the collaboration, involvement, and motivation of all stakeholders. First and second order change will be considered as part of this emphasis. Reform models, as well as transitional and sustainable leadership, will be examined.

Formerly: Will assist aspiring leaders in developing strategies for implementing change in school settings. Will include emphasis on creating conditions for change as well as planning, implementing, and managing change through the collaboration, involvement, and motivation of all stakeholders. First and second order change will be considered as part of this emphasis. Reform models, as well as transitional and sustainable leadership, will be examined.

EDAM 554 Policy Issues in Educational Law, K-12 (3) Educators must know the laws that govern the operation and conduct of their organizations as administrators face a highly litigious society. Will study the relevant legal principles that affect the operation, organization, and administration of American schools. Aspiring leaders will gain knowledge about legal issues that will help them in effectively performing their professional duties within the boundaries of constitutional, statutory, and case law. This course is framed around the necessary skills and knowledge of legal issues for building level administrative positions, mainly the positions of assistant principal or principal. School law elaborates on the legal rights, duties, and responsibilities of school personnel. Specific topics in this course include due process, tort liability, negligence, and contracts. Basic legal relationships between employer, colleagues, students, and adults are addressed.

Formerly: Logical arrangement of case and statutory materials for public school administrators and teachers; problems concerning law and public education.

EDAM 570 Aspiring Leaders Seminar (3) Designed to provide a link between theory and practice in Educational Administration through planned fieldwork experiences. This seminar is a forum for processing the "on-the-job" experiences with others who are also new to the work of administration. Course is planned not only to provide training situations for developing leadership skills, but also to provide community and school agencies with professional assistance. The foundations for this seminar are the Tennessee Instructional Leader Standards (TILS) and the standards from the Professional Standards for Educational Leaders (PSEL) Interstate School Leader Licensure Consortium (ISLLC).

Formerly: Designed to provide a link between theory and practice in Educational Administration through planned fieldwork experiences. This seminar is a forum for processing the "on-the-job" experiences with others who are also new to the work of administration. Course is planned not only to provide training situations for developing leadership skills, but also to provide community and school agencies with professional assistance. The foundations for this seminar are the Tennessee Instructional Leader Standards (TILS) and the standards from the Interstate School Leader Licensure Consortium (ISLLC).

EDAM 580 Internship in Educational Administration (3) Coordinates online activities with practical applications in the student's host school. In the online classroom, the focus is on understanding of the Professional Standards for Educational Leaders (PSEL) and the Tennessee Instructional Leadership Standards (TILS). Students will engage in discussion and real world application of the standards, relation of case studies and possible outcomes to the standards, reflections of the internship and mentoring process, and in-basket activities to investigate and develop decision-making skills.

Formerly: Field experience in appropriate educational setting working directly with administrator. At end of planned program of study. Placement by department assignment.

EDAM 583 Educational Leadership-Principalship (3) Will look at the principalship, specifically the primary roles, traits, and functions of highly effective building level administrators. Will approach the principalship as a complex, multi-faceted profession that requires individuals to demonstrate a number of important leadership traits as well as fulfill a number of interrelated roles within schools. During this class, students will gain an understanding of these roles or functions through a study of the text, the Tennessee Licensure Standards for Principals (TILS), and the National Policy Board for Educational Administration (NPBEA) Standards. This course will rely heavily upon the text as well as scenarios or cases from actual schools as the primary vehicles for discussion and understanding. As much as possible, the focus will not only be on the theoretical traits and roles of the principal but also on how these capacities and functions play out in schools.

Formerly: Knowledge, skills and relationships for principals to be effective educational leaders.

EDAM 588 Best Practices for School Leaders (3) Represents a holistic approach to leadership for meeting the needs of students across the learning continuum, with a particular focus on design and implementation of special service programs within school settings. Will assist aspiring leaders in understanding legal, programmatic, and ethical responsibilities of educational administrators in ensuring appropriate educational services and opportunities for all student populations. The constructs explored include special learner characteristics, program categories, service delivery models, equity issues, and ethical frameworks. This course incorporates the Tennessee Instructional Leadership Standards (TILS) and the Professional Standards for Educational Leaders (PSEL).

Formerly: Designed to acquaint the future school leaders with theories of school leadership and organization that they can employ in their work. Specifically, the course will use organizational theories to examine the practical challenges that leaders face, including faculty structure, alignment of learning standards with curricula and teaching strategies, initiation of new policies or programs, and ongoing evaluation of programs to insure rigorous implementation. Designed to challenge students to examine these different issues through different organizational frames and to collect relevant data before making decisions. Course is based on the assumption that leaders lead from their values and specific frames, and it encourages self-exploration and clarification of additional frames as a strategy to understand events or policies more deeply.

Rationale: These course description changes reflect the current content focus of the courses. Impact on Other Units: The proposed changes do not drop or alter courses required by other programs. Financial Impact: These changes will not require additional resources. Additional Documentation: These are not substantive changes and do not require additional approval.

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELING

Student Learning Objectives for the PhD in Educational Psychology and Research with a concentration in Evaluation, Statistics, and Measurement.

1. Students will write a scholarly review of the literature that seamlessly integrates references.
2. Students will demonstrate mastery of the content in their area of academic concentration and how to apply the content in a practice setting.
3. Students will be actively engaged in their profession.

(EDPY) EDUCATIONAL PSYCHOLOGY

REVISE HOURS AND REPEATABILITY

EDPY 660 Evaluation, Statistics, and Measurement Research Seminar (1-2)
Repeatability: May be repeated: Maximum 8 hours.

Formerly: EDPY 660 Evaluation, Statistics, and Measurement Research Seminar (1)
Repeatability: May be repeated: Maximum 5 hours.

Rationale: Course change is to reflect the additional evaluation fieldwork in Spring semester. The seminar will be one credit hour each Fall semester and two credit hours each Spring semester. The Fall semester is engaged with the design of the project, and the Spring semester is engaged with the field activities. The field of evaluation is becoming more competitive with higher expectations for students. As such, the seminar has grown over the years to encompass more applied professional experiences. The additional credit hour is reflective of the demands of applied evaluation fieldwork. Impact on Other Units: The proposed change does not drop or alter courses required by other programs. Financial Impact: This change will not require additional resources. Additional Documentation: This is not a substantive change and does not require additional approval.

REVISE HOURS AND REMOVE GRADING RESTRICTION

EDPY 670 Internship in Evaluation, Statistics, and Measurement (1-6)

Formerly: EDPY 670 Internship in Evaluation, Statistics, and Measurement (3)
Grading Restriction: Satisfactory/No Credit grading only.

Rationale: Course change is to reflect the growing importance of evaluation fieldwork conducted by students on an independent basis. The variable credit hours will allow students more flexibility in their internship schedules. For each 3 credit hours, students are required to work 100 hours over the semester applying evaluation, statistics, and/or measurement services for a client. Some internship sites require more than 100 hours per semester. In addition, students have requested more flexibility in scheduling internship opportunities. We are changing the grading requirement from pass/not pass to a letter grade to better reflect a student's performance in their internship rather than whether they met a minimum standard of work hours. Furthermore, a letter grading scheme provides better feedback to students to aid in their academic growth. The change does not affect student's path to graduation. The curriculum requirements for internship remain the same (i.e., student must complete 6 hours of internship credits).

Impact on Other Units: Proposed change does not drop or alter courses required by other programs. Financial Impact: This change will not require additional resources. Additional Documentation: This is not a substantive change and does not require additional approval.

DEPARTMENT OF KINESIOLOGY, RECREATION, AND SPORT STUDIES

Student Learner Outcomes
(KNS) KINESIOLOGY

MS Degree in Kinesiology

1. Students will demonstrate an understanding of key disciplinary knowledge.
2. Students will demonstrate the capability to communicate information effectively using disciplinary-appropriate mechanisms.

PhD Degree in Kinesiology

1. Students will demonstrate the ability to conduct and disseminate research.
2. Students will demonstrate mastery of discipline-specific knowledge.
3. Students will demonstrate teaching proficiency.

(RSM) RECREATION and SPORT MANAGEMENT

MS Degree in Recreation and Sport Management

1. Students will apply sport management and therapeutic recreation principles in professional settings.
2. Students will demonstrate an understanding of the foundational knowledge and skills needed in the sport management and therapeutic recreation fields.
3. Students will be able to conduct research and understand its importance in the decision-making process.

PhD Degree in Recreation and Sport Management

1. Students will demonstrate the ability to conduct and disseminate research.

2. Students will demonstrate mastery of discipline-specific knowledge.
3. Students will demonstrate teaching proficiency.

(RSM) RECREATION AND SPORT MANAGEMENT

ADD

RSM 514 Organizational Behavior in Sport Contexts (3) Management principles and practices with the study of human behavior within sport organizations. The focus will be upon translation of management and organizational behavior theory to practices that result in organizational effectiveness, efficiency, and human resource development.
Registration Restriction(s): Recreation and Sport Management major. Minimum student level – graduate.

Rationale: RSM 511 was restructured to focus specifically on personnel management beginning in fall 2018. The proposed course addition will include organizational behavior content that was previously included in RSM 511 prior to the course restructuring. Faculty review of the curriculum resulted in two stand-alone courses being recommended: one focusing on personnel management (RSM 511) and one focusing on organizational behavior (RSM 514).

Impact on Other Units: This course can help relieve enrollment demand in other departmental and professional elective courses. This course should not impact units beyond the department. Financial Impact: There is no financial impact on the department offering the course, or on an outside department. This course will be delivered as part of the normal teaching load of an existing faculty member.

ADD EXISTING 400-LEVEL COURSE FOR GRADUATE CREDIT

RSM 405 Therapeutic Recreation in Public Schools (3) Concepts and techniques of working with children with disabilities in the public schools in Knox and Sevier County special education classes. Students will gain an understanding of various disabling conditions that children with special needs have and how to work with these children. Students will be involved in writing lesson plans, documenting progress, writing progress notes, writing evaluation reports, and leading activities with children in the school setting.
Repeatability: May be repeated. Maximum 6 hours.
(RE) Prerequisite(s): 201 or Kinesiology 100.
Comment(s): Students repeating course will serve in a leadership position.
Registration Restrictions: Recreation and sport management major or kinesiology major.

Rationale: Graduate students were previously directed to enroll in a practicum (RSM 594) and participate in Project Therapeutic Recreation in Public Schools (TRiPS). The graduate students enrolled in this practicum were being supervised by the instructor of the undergraduate course affiliated with Project TRiPS, RSM 405. However, the National Council on Therapeutic Recreation Certification will not allow practicum hours to count as part of the 6 Therapeutic Recreation-specific courses required to sit for the certification exam upon graduation. By dropping the RSM 594 practicum course and making the undergraduate course RSM 405: Therapeutic Recreation in Public Schools available for both undergraduate and graduate credit, students will continue to gain hands on experience through Project TRiPS and will be able to use this course towards certification eligibility. There are two distinct syllabi for the undergraduate and graduate course.

Impact on Other Units: This change will not impact units beyond the department. Financial Impact: There is no financial impact on the department offering the course, or on an outside department. This course will be delivered as part of the normal teaching load of the existing faculty member who was already teaching RSM 405.

DROP

RSM 594 Therapeutic Recreation Practicum (3)

Rationale: This practicum course was designed for Therapeutic Recreation graduate students. The addition of RSM 405 for graduate credit resulted in this course no longer being needed. Impact on Other Units: This change does not affect units outside of the Therapeutic Recreation concentration. Financial Impact: There is no financial impact to the department or college budgets.

DEPARTMENT OF NUTRITION

Student Learner Outcomes
(NUTR) NUTRITION
Learning objectives for the MS in Nutrition

1. By the time of program completion, students enrolled in the master's degree program will demonstrate readiness for professional employment in the discipline.
2. Upon completing the program, students who have completed the dietetic internship option will have demonstrated the ability to understand, interpret, and apply the science of nutrition in individual, clinical, and community settings.
3. Upon completing the program, students in the public health nutrition concentration will have demonstrated the ability to apply public health nutrition skills in community settings.

Learning objectives for the PhD in Nutritional Sciences

1. Upon completing the program, the student will have the ability to interpret, critique, and synthesize research literature in nutrition.
2. Upon completing the program students will have demonstrated the ability to communicate and disseminate research findings.

3. Upon completing the program, the student will have demonstrated the ability to write a NIH-formatted specific aims and research strategy for a grant proposal and to submit a grant proposal for research funding.
4. Upon completing the program, the student will attain a nutrition-related position appropriate to doctoral-prepared program graduates.

(NUTR) NUTRITION

ADD

NUTR 513 Community Nutrition I Practicum (3) Case study, simulation and experiential practice in community nutrition; development of cultural awareness, knowledge, skills, and experience; work with instructor and preceptor(s) to conduct a community nutrition needs assessment; plan, deliver and evaluate a culturally appropriate group nutrition education session; use quality improvement methods to improve nutrition-related community programs, services, or projects.
(DE) Prerequisites: NUTR 412.
Comment(s): Open only to students in the Clinical Nutrition and Dietetics concentration.
Registration Restriction(s): Nutrition majors only. Minimum student level – graduate.

NUTR 514 Community Nutrition II Practicum (3) Experiential practice in community nutrition at local public health and community nutrition agencies; development of cultural awareness, knowledge, skills, and experience; participate in policy development and advocacy activities; plan, implement, and evaluate a population-focused nutrition intervention, culminating in a poster presentation for faculty, preceptors, students, and community members.
(RE) Prerequisites: NUTR 524.
Comment(s): Open only to students in the Clinical Nutrition and Dietetics concentration.
Registration Restriction(s): Nutrition majors only. Minimum student level – graduate.

NUTR 516 Clinical Practice Experience (4) Progression to independent clinical nutrition practice application in a community healthcare clinic setting and development of a collection plan for clinical outcomes data. Introduction to clinical nutrition practice in acute care settings.
(DE) Prerequisite(s): NUTR 420.
Comment(s): Open only to students in the Clinical Nutrition and Dietetics concentration.
Registration Restriction(s): Nutrition majors only. Minimum student level – graduate.

NUTR 520 Clinical Nutrition Outcomes Data Analysis and Interpretation (3) Data analysis, development of data displays, preparation of an abstract and poster or presentation for presentation of findings in a professional setting.
(RE) Prerequisites: NUTR 516 and NUTR 526.
Comment(s): Open only to students in the Clinical Nutrition and Dietetics concentration.
Registration Restriction(s): Nutrition majors only. Minimum student level – graduate.

NUTR 525 Clinical Nutrition III (2) Diagnosis, pathophysiology, management, evidence-based guidelines for nutrition intervention, and case scenario discussion of musculoskeletal diseases/disorders, HIV, inborn errors of metabolism, critical care, nephrology.
(DE) Prerequisite(s): NUTR 416.
Comment(s): Open only to students in the Clinical Nutrition and Dietetics concentration.
Registration Restriction(s): Nutrition majors only. Minimum student level – graduate.

NUTR 526 Clinical Nutrition III Practicum (3) Independent clinical nutrition practice application in a community healthcare clinic setting. Collection of clinical outcomes data based on previously developed plan. Clinical nutrition experience in complex acute care conditions.
(RE) Prerequisite(s): NUTR 516.
(RE) Co-requisite(s): NUTR 525.
Comment(s): Open only to students in the Clinical Nutrition and Dietetics concentration.
Registration Restriction(s): Nutrition majors only. Minimum student level – graduate.

NUTR 527 Advanced Clinical Practice and Mentorship (3) Advancement of independent clinical nutrition practice in a community healthcare clinic setting to include mentorship of undergraduate students as they are introduced to clinical nutrition practice.
(RE) Prerequisite(s): NUTR 526.
Comment(s): Open only to students in the Clinical Nutrition and Dietetics concentration.
Registration Restriction(s): Nutrition majors only. Minimum student level – graduate.

NUTR 530 Healthcare Foodservice Management (3) Experiential learning in the healthcare foodservice setting with a focus on operations and management roles.
(DE) Prerequisites: NUTR 330; Hotel, Restaurant, and Tourism (HRT) 445.
Comment(s): Open only to students in the Clinical Nutrition and Dietetics concentration.
Registration Restriction(s): Nutrition majors only. Minimum student level – graduate.

Rationale: These course additions are in anticipation of approval of the proposed Master of Science in Nutrition concentration in Clinical Nutrition and Dietetics (being proposed, concurrently, in this proposal below). These course additions are not relevant to the SLOs. Rather they address competencies outlined by our accrediting body and pertain only to students in the proposed new concentration. Impact on Other Units: These courses will be taken only by students in the proposed new MS concentration. There should be no impact on other units.

Financial Impact: These course additions will affect the department budget. We will be hiring two new faculty members over the course of the two year roll out. These costs will be covered by a program fee paid by students entering the new MS concentration (Clinical Nutrition and Dietetics), being concurrently proposed below. These fees have been approved by the Senior Vice Chancellor for Finance and Administration. The department is not planning on asking for any additional resources to support these changes.

Additional Documentation: No additional approvals are required for these changes. These changes are not substantive and do not need to be reported to SACSCOC.

REVISE TO ADD (RE) PREREQUISITE(S)

NUTR 515 Field Study in Community Nutrition (3-12)
(RE) Prerequisite(s): 524.

Rationale: Adding NUTR 524 as a prerequisite for NUTR 515 better reflects the expected course enrollment timing. This change does not directly address any SLO. Impact on Other Units: These courses are only required of NUTR students. There should be no impact on other units. Financial Impact: This change has no financial impact as both courses are already a requirement of our program. Therefore, there is no impact on resources. Additional Documentation: No additional approvals are required for this change.

REVISE (DE) PREREQUISITE(S)

NUTR 626 Life Course Nutrition (3)
(DE) Prerequisite(s): 510, 511, or consent of instructor.

Formerly: NUTR 626 Life Course Nutrition (3)
(DE) Prerequisite(s): 511 or consent of instructor.

Rationale: Public Health Nutrition students take NUTR 510 and Cellular Molecular Nutrition students take NUTR 511. Both are appropriate prerequisites for this course and the addition of 510 as a prerequisite will streamline registration for the course. These changes do not directly address any SLO. Impact on Other Units: These courses are only required of NUTR students. There should be no impact on other units. Financial Impact: This change has no financial impact as all courses are already a requirement of our program. Therefore, there is no impact on resources.

REVISE (RE) PREREQUISITE TO (RE) COREQUISITE AND ADD COMMENT(S)

NUTR 519 Analysis of Practice in Community Nutrition (3)
(RE) Corequisite(s): 515 or consent of instructor.
Comment(s): NUTR 515 may be taken prior to or concurrently with NUTR 519.

Formerly: NUTR 519 Analysis of Practice in Community Nutrition (3)
(RE) Prerequisite(s): 515.

Rationale: Depending on timing, students in the Public Health Nutrition concentration may be prepared to complete both NUTR 515 (Field Study in Community Nutrition) and NUTR 519 (Analysis of Practice in Community Nutrition) at the same time. This change would allow these students to register for both courses during the same semester, and potentially avoid staying an additional semester to complete this one course (NUTR 519). The addition of the comment provides further clarification for students. These changes do not directly address any SLO. Impact on Other Units: These courses are only required of NUTR students. There should be no impact on other units. Financial Impact: This change has no financial impact as all courses are already a requirement of our program. Therefore, there is no impact on resources.

REVISE TO ADD (RE) REGISTRATION RESTRICTION(S)

NUTR 524 Public Health Nutrition: Community Assessment, Intervention, and Evaluation (4)
Registration Restriction(s): Nutrition majors only. Minimum student level – graduate.

Formerly: NUTR 524 Public Health Nutrition: Community Assessment, Intervention, and Evaluation (4)

Rationale: This is a housekeeping item. We added NUTR 524 to the catalog in 2018, but failed to add a registration restriction at that time. Because of the burden on community partners, we must restrict this course to NUTR students only. This change does not directly address any SLO. Impact on Other Units: This course is only required of NUTR students. There should be no impact on other units. Financial Impact: This change has no financial impact. It is simply a housekeeping item.

DEPARTMENT OF PUBLIC HEALTH

Student Learner Outcomes

1. Learning objectives for the DrPH Program
2. Students will demonstrate clarity of scientific writing skills.
3. Students will demonstrate clarity of verbal expression and the ability to respond to scientific questions in a clear and accurate manner.
4. Students will demonstrate mastery of complex scientific and technical issues relevant to the student's area of research.
5. Students will demonstrate mastery of complex scientific and technical skills relevant to the student's broader foundation in health behavior and health education.

6. Learning objectives for the MPH Program
7. Students will demonstrate readiness for professional practice in health-related settings.
8. Students will demonstrate critical thinking & problem-solving abilities reflecting the integration of public health competencies.
9. Students will develop effective presentation skills.
10. Students will appraise mastery of 22 core public health competencies.

(PUBH) PUBLIC HEALTH

ADD

PUBH 556 Grant Proposal Writing for Health and Social Programs (4) This project-based course covers the complete process of grant proposal development: identification and assessment of viable funding sources, funder relations, proposal writing, budget development, preparation of a full proposal for submission, and proposal submission. Students gain an understanding of the nonprofit philanthropic, state, and federal funding environments and how they differ.

Rationale: The MPH Program regularly collects feedback from students, graduates and community stakeholders. There has been a recurring request and support for a grant proposal writing course. It is a skill-set that is both desired and marketable. To this end we are adding a grant writing course to the curriculum. The proposed course was reviewed and approved by both the MPH Academic Program Committee and the full DPH faculty. Impact on Other Units: As this is a new course there is no impact on other units. Financial Impact: Existing faculty will teach this course, no financial impact.

PUBH 630 Advanced Biostatistics (3) Biostatistics is the application of statistics to biological problems. Offers advanced instruction in biostatistics, including the application of advanced inferential statistical methods to public health practice. Will cover a variety of multivariable modeling approaches, data management, and analysis planning and development. *(RE) Prerequisite(s): PUBH 530 or permission of the instructor.*

Rationale: A new Doctoral course designed to comply with the revised accreditation criteria released by Council on Education for Public Health in November 2016. Specifically, this course is designed to provide a foundation in multivariate statistics and the SAS statistical package, by which the Doctoral students can meet the Council on Education for Public Health's quantitative analysis competency. Impact on Other Units: None expected. Financial Impact: There is no financial impact. This course will be taught by current DPH faculty member; therefore, faculty investment remains the same.

PUBH 635 Systematic Reviews and Meta-Analysis (3) Systematic reviews and meta-analyses are important components of the epidemiologist's toolbox. They often provide the foundations for understanding the state of current research on a given exposure-outcome relationship, and may offer opportunities for future research topics. *(RE) Prerequisite(s): PUBH 540 or permission of the instructor.*

Rationale: A new Doctoral course designed to comply with the revised accreditation criteria released by Council on Education for Public Health in November 2016. Specifically, this course is designed for Doctoral students to meet the following foundational competencies: (1) Communicate public health science to diverse stakeholders, including individuals at all levels of health literacy, for purposes of influencing behavior and policies; (2) Explore, critique, and apply evidence-based information from multiple sources to Public Health products/issues. Impact on Other Units: None expected. Financial Impact: There is no financial impact. This course will be taught by current DPH faculty; therefore, faculty investment remains the same.

PUBH 650 Dissemination and Implementation Science (3) Design a system-level intervention, emphasizing best pedagogical practices in delivering an educational experience in a community setting.

Rationale: A new Doctoral course designed to comply with the revised accreditation criteria released by Council on Education for Public Health in 2016. Specifically, this course is designed for Doctoral students to meet the following foundational competencies: (1) Use best practice modalities in pedagogical practices; (2) Deliver training or educational experiences that promote learning in academic, organizational or community settings; (3) Design a system-level intervention to address a public health issue; and (4) Demonstrate ability to write funding applications to support Public Health initiatives, applying one or more theories or models. Impact on Other Units: None expected beyond benefit of meeting the revised requirement of Council on Education for Public Health accreditation criteria. Financial Impact: No financial impact is expected. This course will be taught by current DPH faculty; therefore, faculty investment remains the same.

REVISE TITLE, HOURS, AND DESCRIPTION

PUBH 552 Assessment and Planning (3) Applies an ecological framework to health assessment and program planning to address health disparities. Requires 25 or more hours of community service learning.

Formerly: Community Health Assessment (4) Critical Analysis of Community Health Assessment (CHA), development and implementation of CHA, written and oral presentation of CHA, development of written dissemination tool for the statewide community audience of TN. Requires 25 or more hours of community service learning.

Rationale: The MPH Program is accredited by The Council on Education for Graduate Programs (CEPH). CEPH released new accreditation requirements in fall 2016. Programs have until January 2019 to document compliance. The revision reflects the changes necessary to comply with the 2016 accreditation guidelines for a competency-based curriculum and add no additional credit hours to the curriculum. The proposed change was reviewed and approved by both the MPH Academic Program Committee and the full DPH faculty.

Impact on Other Units: The course is required by MS (Nutrition)-MPH, DVM-MPH and JD-MPH dual degree programs. The coordinator of each program reviewed the changes and determined there is no impact. Financial Impact: The course will be taught by current faculty. There is no financial impact.

REVISE TITLE AND DESCRIPTION, ADD (DE) PREREQUISITE(S) AND REGISTRATION RESTRICTION(S)

PUBH 540 Epidemiology (3) The distribution and determinants of health-related outcomes in specified populations with application to control of health problems. Issues addressed include: historical origins of discipline, hypothesis formulation, research design, data and error sources, measures of frequency and association, etiologic reasoning, and disease screening.
(DE) Prerequisite(s): Introductory statistics.
Registration Restriction(s): Public Health major (MPH); Nutrition major (MS), public health nutrition concentration; or Public Health major (DrPH), or consent of instructor.

Formerly: Principles of Epidemiology (3) Distribution and determinants of health-related outcomes in specified populations, with application to control of health problems. Historical origins of discipline, hypothesis formulation, research design, data and error sources, measures of frequency and association, etiologic reasoning, disease screening, and injury control.
(DE) Prerequisite(s): None.
Registration Restriction(s): None.

Rationale: The MPH Program is accredited by The Council on Education for Graduate Programs (CEPH). CEPH released new accreditation requirements in fall 2016. Programs have until January 2019 to document compliance. The revision reflects the changes necessary to comply with the 2016 accreditation guidelines for a competency-based curriculum. The proposed course change was reviewed and approved by both the MPH Academic Program Committee and the full DPH faculty.

Impact on Other Units: The course listed above is relevant to the MS (Nutrition)-MPH, DVM-MPH and JD-MPH dual degree programs. The coordinators of each program has reviewed the changes and determined there is no impact. Financial Impact: The course will be taught by current faculty. There is no financial impact.

REVISE TITLE AND DESCRIPTION, ADD REGISTRATION RESTRICTION(S), AND REMOVE COMMENT(S)

PUBH 510 Environmental Health (3) Study of the environmental factors (natural, anthropogenic or combination) on human health and the integrity of the ecosystem.
Registration Restriction(s): Minimum student level – graduate.

Formerly: Environmental Health Science (3) Health risks and complexities of macro and micro environments impacting population health as well as individual's health and response to a diverse and dynamic world. Principles of environmental health and potential exposures. Survey of contemporary environmental issues and their implications for healthful living.
Comment(s): Admission to MPH or public health nutrition (MS) programs or consent of instructor required.
Registration Restriction(s): None.

Rationale: The MPH Program is accredited by The Council on Education for Graduate Programs (CEPH). CEPH released new accreditation requirements in fall 2016. Programs have until January 2019 to document compliance. The revision reflects the change necessary to comply with the 2016 accreditation guidelines for a competency-based curriculum. The proposed course change was reviewed and approved by both the MPH Academic Program Committee and the full DPH faculty.

Impact on Other Units: The course listed above is relevant to the MS (Nutrition)-MPH, DVM-MPH and JD-MPH dual degree programs. The coordinators of each program has reviewed the changes and determined there is no impact. Financial Impact: The course will be taught by current faculty. There is no financial impact.

REVISE TITLE AND DESCRIPTION

PUBH 520 Health Systems, Policy and Leadership (3) Exploration of public health and healthcare systems, health policy formulation, and associated implications for management and leadership.

Formerly: Public Health Policy and Administration (3) Administrative considerations of community-based health care programs and public health practice. Health policy formulation, political environment and governmental involvement in health, legal responsibilities, and managerial concepts/techniques/process.

PUBH 550 Program Development and Implementation (3) Requires the application of behavioral sciences theory to the development and implementation of health promotion programs.

Formerly: Theory, Program Development, and Implementation (3) Theoretical foundations for community health education; opportunities to develop skills in program development and implementation associated with community health education.

Rationale: The MPH Program is accredited by The Council on Education for Graduate Programs (CEPH). CEPH released new accreditation requirements in fall 2016. Programs have until January 2019 to document compliance. The revisions (listed above) reflect the changes necessary to comply with the 2016 accreditation guidelines for a competency-based curriculum. The proposed course changes were reviewed and approved by both the MPH Academic Program Committee and the full DPH faculty.

Impact on Other Units: The courses listed above is relevant to the MS (Nutrition)-MPH, DVM-MPH and JD-MPH dual degree programs. The coordinators of each program has reviewed the changes and determined there is no impact. Financial Impact: Each course will be taught by current faculty. There is no financial impact.

PUBH 640 Advanced Epidemiology in Public Health (3) Epidemiology is the study of the distribution and determinants of health-related outcomes at the population level. Topics addressed include measures of disease, measures of effect, sources of error, advanced methodological issues unique to the observational and experimental study designs utilized in public health practice and research, causal inference, and screening and clinical epidemiology.

Formerly: Advanced Epidemiological Methods (3) A detailed examination of the epidemiologic methods used in cohort, case-control, and experimental studies. Particular emphasis in critiquing and understanding epidemiologic methods in the professional literature. Application of higher-level methods that can be utilized in the public health practice setting. Analytic methods will include multiple logistic regression and survival analysis.

Rationale: The description of this doctoral course has been revised to better reflect the content and the accreditation criteria released by Council on Education for Public Health in 2016. Both content and associated competencies expand beyond methods; the previous focus of the course description. Specifically, this course is now designed for doctoral students to meet the following foundational competencies: (1) Explain qualitative and evaluation methods to address health issues at multiple (individual, group, organization, community and population) levels; (2) Compare and contrast the quantitative study designs most commonly used to investigate the determinants of disease and health or the evaluation of programs and policies; and (3) Explain the use and limitations of surveillance systems and national surveys in assessing, monitoring and evaluating policies and programs and to address a population's health.

Impact on Other Units: None expected; existing course. Financial Impact: There is no financial impact. This course is now being taught by current DPH faculty; therefore, faculty investment remains the same.

REVISE HOURS, DESCRIPTION AND ADD REPEATABILITY

PUBH 587 Internship (3-6) Internship in approved organization under supervision of designated preceptor. Students must complete a total of 6 credit hours.
Repeatability: May be repeated. Maximum 6 hours.

Formerly: (3), Internship in either approved organization or research setting under supervision of designated preceptor.

Rationale: This change will allow students to register for only one internship course instead of two to three separate courses. This simplifies the internship registration process for students, staff, and faculty.

Impact on Other Units: The course listed above is required by MS (Nutrition)-MPH, DVM-MPH and JD-MPH dual degree programs. The coordinators of each program has reviewed the changes and determined there is no impact. Financial Impact: The current faculty will continue to supervise the course. No new resources are needed.

REVISE DESCRIPTION AND REMOVE (RE) PREREQUISITE(S)

PUBH 536 Research Methods in Public Health (3) Research design, basic quantitative and qualitative research techniques and ethical considerations. Development of research skills, data collection instruments, and problem identification for research topic.

Formerly: Research design, sampling, basic quantitative and qualitative research techniques. Development of research skills, data collection instruments, and problem identification for research topic. Requires at least 15 hours of community service learning.
(RE) Prerequisite(s): 530, an equivalent, or consent of the instructor.

Rationale: The MPH Program is accredited by The Council on Education for Graduate Programs (CEPH). CEPH released new accreditation requirements in fall 2016. Programs have until January 2019 to document compliance. The revision reflects the changes necessary to comply with the 2016 accreditation guidelines for a competency-based curriculum. The proposed course change was reviewed and approved by both the MPH Academic Program Committee and the full DPH faculty.

Impact on Other Units: The course listed above is relevant to the MS (Nutrition)-MPH, DVM-MPH and JD-MPH dual degree programs. The coordinators of each program has reviewed the changes and determined there is no impact. Financial Impact: The course will be taught by current faculty. There is no financial impact.

REVISE DESCRIPTION AND (RE) PREREQUISITE(S)

PUBH 537 Fundamentals of Program Evaluation (3) Introductory course on the different types of program evaluation, including formative research, process evaluation, monitoring of outcomes, impact assessment and cost analysis. Covers experimental, quasi-experimental and non-experimental study designs and the strengths and limitations of each.
(RE) Prerequisite(s): 530 or Statistics 531 or consent of instructor.

Formerly: Familiarizes students in different types of program evaluation, including needs assessment, formative research, process evaluation, monitoring of outcomes, impact assessment, and cost analysis. The course covers experimental, quasi-experimental, and non-experimental study designs, including the strengths and limitations of each.
(RE) Prerequisite(s): 530 or Statistics 531; and PUBH 540.

Rationale: The MPH Program is accredited by The Council on Education for Graduate Programs (CEPH). CEPH released new accreditation requirements in fall 2016. Programs have until January 2019 to document compliance. The revision reflects the changes necessary to comply with the 2016 accreditation guidelines for a competency-based curriculum. The proposed course change was reviewed and approved by both the MPH Academic Program Committee and the full DPH faculty.

Impact on Other Units: The course listed above is relevant to the MS (Nutrition)-MPH, DVM-MPH and JD-MPH dual degree programs. The coordinators of each program has reviewed the changes and determined there is no impact. Financial Impact: The course will be taught by current faculty. There is no financial impact.

REVISE DESCRIPTION, ADD (DE) PREREQUISITE(S) AND REGISTRATION RESTRICTION, REMOVE RECOMMENDED BACKGROUND AND COMMENT(S)

PUBH 530 Biostatistics (3) Application of descriptive and inferential statistical methods to analyze and interpret data for health-related problems and programs.
(DE) Prerequisite(s): Introductory statistics.
Registration Restriction(s): Public Health major (MPH); Nutrition major (MS), public health nutrition concentration; or Public Health major (DrPH), or consent of instructor.

Formerly: Application of descriptive and inferential statistical methods to health-related problems and programs. Microcomputer applications, use and interpretation of vital statistics and introductory research methodology preparatory for first course in epidemiology.
Recommended Background: Introductory statistics course.
Comment(s): Admission to MPH or public health nutrition (MS) programs or consent of instructor.

Rationale: The MPH Program is accredited by The Council on Education for Graduate Programs (CEPH). CEPH released new accreditation requirements in fall 2016. Programs have until January 2019 to document compliance. The revision reflects the changes necessary to comply with the 2016 accreditation guidelines for a competency-based curriculum. The proposed course change was reviewed and approved by both the MPH Academic Program Committee and the full DPH faculty.

Impact on Other Units: The course listed above is relevant to the MS (Nutrition)-MPH, DVM-MPH and JD-MPH dual degree programs. The coordinators of each program has reviewed the changes and determined there is no impact. Financial Impact: The course will be taught by current faculty. There is no financial impact.

REVISE DESCRIPTION

PUBH 555 Health and Society (3) Provides students with an understanding of social and behavioral determinants that influence health status and care in America. The application of this knowledge to behavior in health-related organizations is emphasized. Topics include social and psychological aspects of disease, sociological aspects of health care delivery systems, the political economy of health and illness, impact of social movements on health, and social consequences of health legislation.

Formerly: Understanding of social and behavioral factors which influence health status and care in America. Application to behavior in health-related organization. Social and psychological aspects of disease, sociological aspects of health care delivery systems, political economy of health and illness, impact of social movements on health, and social consequences of health legislation.

Rationale: The MPH Program is accredited by The Council on Education for Graduate Programs (CEPH). CEPH released new accreditation requirements in fall 2016. Programs have until January 2019 to document compliance. The revision reflects the change necessary to comply with the 2016 accreditation guidelines for a competency-based curriculum. The proposed course change was reviewed and approved by both the MPH Academic Program Committee and the full DPH faculty.

Impact on Other Units: The course listed above is relevant to the MS (Nutrition)-MPH, DVM-MPH and JD-MPH dual degree programs. The coordinator of each program has reviewed the changes and determined there is no impact. Financial Impact: The course is, and will continue to be taught by current faculty. There is no financial impact.

DEPARTMENT OF THEORY AND PRACTICE IN TEACHER EDUCATION

Student Learner Outcomes

MS Track I Learner Outcomes (Educational Studies Concentration and Practitioner Concentration))

1. Demonstrates rich understanding of subject(s) taught and appreciation of how knowledge in subject area(s) is created, organized, and linked to real-world settings.
2. Demonstrates the ability to reason and to take multiple perspectives.
3. Demonstrates quality of writing that is expected of advanced graduate students.

MS Track II Learner Outcomes (Professional Internship Concentration)

1. The candidate understands the central concepts, tools of inquiry, structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students. (Corresponds to InTASC Standard 1)
2. The candidate understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners. (Corresponds to InTASC Standard 3)
3. The candidate understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills. (Corresponds to InTASC Standard 4)

EdS Learner Outcomes

1. Demonstrate an adoption of an experimental and problem-solving orientation
2. Critically examine own practice and adapt teaching to new findings, ideas, and theories
3. Demonstrate quality of writing that is expected of advanced graduate students

World Savvy Certificate Learner Outcomes

1. Students will understand that world events and global issues are complex and interdependent.
2. Students will understand that multiple conditions fundamentally affect diverse global forces, events, conditions, and issues

3. Students will develop values and attitudes that include (but are not limited to) a self-awareness about identity and culture, and sensitivity and respect for differences
4. Students will develop skills that include (but are not limited to) investigating global issues by framing questions, analyzing and synthesizing relevant evidence
5. Students will develop behaviors that include (but are not limited to) seeking out and applying an understanding of different perspectives to problem solving and decision making

(ASL) AMERICAN SIGN LANGUAGE

ADD AS SECONDARY CROSS-LISTED COURSE

ASL 523 Practicum (3) Supervised practicum. Planning social justice oriented units for the ASL/English bilingual classroom.
Cross-listed: (See Education of the Deaf and Hard of Hearing 523.)
(DE) Prerequisite(s): EDDE 310 with a grade of B or better; American Sign Language 212 with a grade of B or better.
Comment(s): Taught in American Sign Language.
Registration Restriction(s): Admission to Teacher Education major.

Rationale: We are adding ASL 523 and cross listing it with EDDE 523. A state bill, HB0462/SB0524, was passed and signed into law effective 7/1/17, which allows high school students to take ASL as a foreign language. A concentration in ASL Education allows us to begin filling the demand in the state of TN for licensed ASL teachers, K-12. ASL 523 is a practicum in an ASL classroom. There is considerable overlap with the content and experiences of EDDE 523. Students from both programs will learn about lesson and unit planning together in an ASL instructional environment. Practicum placements will differ.

Impact on Other Units: Requesting cross-listing between EDDE 523 and ASL 523. This course is required for ASL program and will not impact other programs or courses. It is not a general education tracking or high impact course. Financial Impact: There is no financial impact as EDDE 523 is already offered and taught by current faculty. Additional Documentation: No additional approval is required.

(EDDE) EDUCATION OF THE DEAF AND HARD OF HEARING

REVISE TITLE, DESCRIPTION, (DE) PREREQUITE AND ADD AS PRIMARY CROSS-LISTED COURSE

EDDE 523 Practicum (3) Supervised practicum. Planning social justice oriented units for the ASL/English bilingual classroom.
Cross-listed: (Same as American Sign Language 523.)
(DE) Prerequisite(s): 310 with a grade of B or better; American Sign Language 212 with a grade of B or better.
Comment(s): Taught in American Sign Language.
Registration Restriction(s): Admission to Teacher Education major.

Formerly: Practicum with the Deaf and Hard of Hearing (3) Supervised practicum working with deaf and hard of hearing students. Classroom management strategies working with deaf and hard of hearing students.
(RE) Prerequisite(s): ASL 212.

Rationale: If students have not had lesson planning previously, they will need a beginning class in this area before taking EDDE 523. Instructors observed that this was necessary for graduate students who do not have a background in teaching or Deaf Education. Title change is being made to align with the cross listed course – ASL 523. We are adding ASL 523 and cross listing it with EDDE 523. A state bill, HB0462/SB0524, was passed and signed into law effective 7/1/17, which allows high school students to take ASL as a foreign language. A concentration in ASL Education allows us to begin filling the demand in the state of TN for licensed ASL teachers, K-12. ASL 523 is a practicum in an ASL classroom. There is considerable overlap with the content and experiences of EDDE 523. Students from both programs will learn about lesson and unit planning together in an ASL instructional environment. Practicum placements will differ. Impact on Other Units: No impact on other units. Financial Impact: There is no financial impact.

(REED) Reading Education

REVISE TITLE, DESCRIPTION, REMOVE REGISTRATION RESTRICTION AND RECOMMENDED BACKGROUND

REED 605 Transforming, Supporting, and Coaching for Effective Literacy Instruction (3) Analyzing school literacy needs, developing effective professional development, and coaching adult learners.

Formerly: Organizing and Administering Reading Programs (3) Diagnosing and teaching children having developmental and corrective reading needs in the regular classroom.
Recommended Background: Course in diagnosis and correction of reading problems or consent of instructor.
Registration Restriction(s): Minimum student level – graduate.

Rationale: The title and description were adjusted to be more in line with current language associated with literacy education and the standards set for literacy specialists by our leading professional organization. In recent years we have shifted our program title from "Reading Education" to "Literacy Education" and we are working to adjust all the coursework titles to reflect more contemporary language. In addition, we have recently received an updated set of standards from the International Reading Association regarding what is required for preparing Literacy Specialists, and we incorporated that language with its specific foci into the updated course description.

Literacy Education has replaced Reading Education as this concentration, and language used in course descriptions should reflect this more contemporary set of ILA standards. The description was made more specific to current language pertaining to literacy education

rather than more dated terminology linked to reading education. In addition, our largest professional organization (ILA) has issued a new set of standards that feature different wording and conceptions of what is required of literacy specialists.

Impact on Other Units: The course is required for literacy education majors and licensing, but the change in restriction and description of the course will not influence this. It is not a general education tracking or high demand course. The course is NOT cross-listed in other units. Any student from our unit or other units should be taking the course for graduate credit so the restriction change or the description change should not impact anyone.

Financial Impact: The restriction change or the description change should not impact the department or college financially. These changes should not impact enrollment and, therefore, not impact staffing.

REVISE DESCRIPTION

REED 543 Literacy and Literature in the Middle Grades (3) Problems and issues particular to teaching reading in the middle grades including teaching reading in an integrated curriculum, dealing with students reading below grade level, and teaching concept vocabulary.

Formerly: Problems and issues particular to teaching reading in the middle grades including teaching reading in an integrated curriculum, dealing with students reading below grade level, and teaching concept vocabulary. The literature base for early adolescents will be explored and analyzed.

Rationale: The description was adjusted to be more in line with current TN state standards regarding middle grades literacy. Tennessee changed its licensure categories regarding middle grades education, and the current proposed description is tailored to those changes. Impact on Other Units: The course is required for literacy education majors and licensing, but the change in description of the course will not influence this. It is not a general education tracking or high demand course. The course is NOT cross-listed in other units. Financial Impact: The description change should not impact the department or college financially. These changes should not impact enrollment and, therefore, not impact staffing.

REED 603 Advanced Studies and Theoretical Models of Reading (3) Research on reading processes. Current theoretical models of literacy learning and practice.

Formerly: Research on reading processes. Current theoretical models related to how learners process print.

Rationale: The description was adjusted to be more in line with current TN state standards regarding middle grades literacy. Literacy Education has replaced Reading Education as this concentration, and language used in course descriptions should reflect this more contemporary stance. The description was made more specific to current language pertaining to middle grades literacy education rather than more dated terminology linked to reading education and the past iteration of middle grades licensure. Impact on Other Units: The course is required for literacy education majors and licensing, but the change in the description of the course will not influence this. It is not a general education tracking or high demand course. The course is NOT cross-listed in other units. Financial Impact: The description change should not impact the department or college financially. These changes should not impact enrollment and, therefore, not impact staffing.

REVISE DESCRIPTION AND REMOVE RECOMMENDED BACKGROUND

REED 540 Teaching the Struggling Adolescent Reader (3) Methods of teaching all secondary students to successfully engage in literacy processes.

Formerly: Methods of teaching middle and high school students who do not have sufficient reading skill to successfully engage in required reading.
Recommended Background: Course in reading education, or equivalent teaching experience, or consent of instructor

Rationale: The description was revised to be more specific to current language pertaining to literacy education rather than more dated terminology linked to reading education. Impact on Other Units: The course is required for literacy education majors and licensing, but the change in recommended background and description of the course will not influence this. It is not a general education tracking or high demand course. The course is NOT cross-listed in other units. Any student from our unit or other units should be taking the course for graduate credit so the recommended background or the description change should not impact anyone. Financial Impact: The recommended background and the description change should not impact the department or college financially. These changes should not impact enrollment and, therefore, not impact staffing.

REVISE TO ADD (DE) PREREQUISITE(S) AND REMOVE RECOMMENDED BACKGROUND

REED 530 Teaching Reading in the Elementary School (3)
(DE) Prerequisite(s): Cannot be taken prior to REED 430 for initial license students.

Formerly: Recommended Background: Course in teaching of reading or consent of instructor.

Rationale: The department enforced prerequisite was added to indicate the prerequisite for a particular licensure track. Students seeking a course for their senior privilege option should take this course in sequence after REED 430, which is more introductory. Some initial licensure students enroll in this course without having taken REED 430, which introduces many background concepts necessary for success in REED 530. The (DE) Prerequisite change and removing the recommended background is not driven by SACS assessment.

Impact on Other Units: The course is required for elementary education majors and licensing, but the change in (DE) Prerequisite and removing the recommended background will not influence this. It is not a general education tracking or high demand course, nor is it a pre- or co-requisite for other courses. The course is NOT cross-listed in other units. Financial Impact: The change in (DE) Prerequisite

and removing the recommended background should not impact the department or college financially. These changes should not impact enrollment and, therefore, not impact staffing.

(SPED) SPECIAL EDUCATION

ADD

SPED 542 Methods of Teaching Students with Emotional and Behavioral Disorders (3) Examines educational strategies and techniques for individual and class-wide behavior management as well as curriculum and teaching strategies for promoting the social and emotional development of students with emotional and behavioral disorders. Both reactive and proactive strategies for working with students are addressed.
(RE) Prerequisite(s): 402.

Rationale: The SPED program added a new undergraduate version of the Behavior Disorders course but could not use the number SPED 456. The undergraduate version was added as SPED 442. To keep the undergraduate and graduate course numbers parallel, we want to drop SPED 556 and move the content to the newly added course, SPED 542, with the parallel number.

Impact on Other Units: This will not affect other units. This is the same course content as SPED 556 with a different number. Financial Impact: This course will be taught by existing faculty / instructors who already teach SPED 556 and will have no financial impact.

SPED 552 Classroom Management (3) Designed to examine validated methodology of class-wide and individual strategies for successfully managing a classroom across a variety of learning environments and levels. Participants will develop an understanding of motivation and behavior to create a learning environment that encourages positive social interactions, active engagement in learning, and self-motivation.
(RE) Prerequisite(s): 402.

Rationale: The SPED program added a new undergraduate version of the Classroom Management course but could not use the number SPED 457. The undergraduate version was added as SPED 452. To keep the undergraduate and graduate course numbers parallel, we want to drop SPED 557 and move the content to the newly added course, SPED 552.

Impact on Other Units: This will not affect other units. This is the same course content (Classroom Management) as SPED 557 with a different number. Financial Impact: This course will be taught by existing faculty / instructors who already teach SPED 557 and will have no financial impact.

EQUIVALENCY TABLE

CURRENT COURSES (SPED)	COURSES EFFECTIVE FALL 2019 (SPED)
SPED 556	SPED 542
SPED 557	SPED 552

DROP

SPED 556 Methods of Teaching Students with Emotional and Behavioral Disorders (3)

Rationale: The SPED program added new undergraduate version of the Behavior Disorders course. The undergraduate number SPED 456 could not be used for the Behavior Disorders course so that course number is being changed to SPED 442. To keep the undergraduate and graduate course numbers parallel, we want to drop SPED 556 and add the course with the number SPED 542.

Impact on Other Units: This will not affect other units. The course content will be available with a different number. Financial Impact: There will be a version of this course with a new number. It will be taught by existing faculty / instructors who already teach the Behavior Disorders course and will have no financial impact.

SPED 557 Classroom Management (3)

Rationale: The SPED program added a new undergraduate version of the Classroom Management course but could not use the number SPED 457. To keep the undergraduate and graduate course numbers parallel, we want to drop SPED 557 and add the course content with the number SPED 552.

Impact on Other Units: This will not affect other units. This is the same course content (Classroom Management) as SPED 557 with a different number. Financial Impact: This course will be taught by existing faculty / instructors who already teach this content as SPED 557 and will have no financial impact.

(SSCE) SECONDARY SOCIAL SCIENCE EDUCATION

ADD

SSCE 532 Teacher Collaboration in Social Studies (3) Provides prospective educators authentic models of practice to effectively collaborate as means to meet the needs of diverse learners in secondary classrooms.

Rationale: The Secondary Social Science Education program has hired two new tenure track faculty members over the last 4 years. As a result, we are now able to offer additional coursework to students specific to professional licensure and content area specializations. The proposed new course has been taught for the last two years as a Special Topics (TPTE 595). These are temporary courses and now we would like to make the course permanent. The proposed new course would be part of the secondary social studies program

core course offerings, which requires 12 hours, but we currently only have 9 hours of SSCE specific coursework. This addition would allow us to complete the 12 hours of core coursework requirements with social studies specific course designations. Student evaluations and feedback from prior courses have indicated that this course is informative and helpful in understanding the unique aspects associated with collaborative teaching for diverse learners. The change is not associated with SACs Assessment.

Impact on Other Units: This change has no impact on other majors, does not alter courses required by other programs, does not require courses offered by other programs, is not a high demand course, or a general education course, nor is it a pre- or co-requisite. In our review of the graduate catalog, we determined that there is no impact on other units. All courses will be taught within the department. Financial Impact: It will not affect the college budget, as the course is already a part of the course load for existing faculty.

II. PROGRAM CHANGES

DEPARTMENT OF CHILD AND FAMILY STUDIES

Student Learner Outcomes
(CFS) CHILD AND FAMILY STUDIES

1. Students will demonstrate an understanding and knowledge of child and adolescent development
2. Students will demonstrate an understanding of contemporary family processes and transitions in the context of marriage and parenting.
3. Students in the Community Outreach track will demonstrate the ability to interact professionally and work effectively with children and families in diverse community contexts.
4. Students in the Teacher Licensure track will apply the knowledge and skills appropriate to practice in settings with young children.

REVISE PROGRAM REQUIREMENTS – CHILD AND FAMILY STUDIES MAJOR, MS – TEACHER-LICENSURE (PREK-3) CONCENTRATION

In the 2019-2020 Graduate Catalog, remove current text and replace with the following (the hours listed remains the same):

Teacher-Licensure (PreK-3) Concentration
Requirements
The teacher-licensure (PreK-3) concentration is designed for students seeking a MS along with initial teacher licensure in early childhood education (PreK through Grade 3). The teacher licensure concentration only, is comprised of 24 credit hours and completion of the practice-based review of research paper. At the University of Tennessee, Knoxville, students interested in the MS with a major in child and family studies [teacher-licensure (PreK-3) concentration] must apply for admission to graduate study through the procedures outlined above. Application for admission to teacher licensure (PreK-3) is a part of the application process to the graduate program and is described in the Undergraduate Catalog. Admission to teacher-licensure (PreK-3) is concurrent with admission to the child and family studies master's program; licensure can be earned (24 credit hours) without completing a Master's degree. The teacher-licensure (PreK-3) Master's degree with licensure requires 36 credit hours of graduate course work and a practice-based review of research paper.

Required Comprehensive Exam: a practice-based review of research.

Formerly:
The teacher-licensure (PreK-3) concentration is designed for students seeking a MS along with initial teacher licensure in early childhood education (PreK through Grade 3). At the University of Tennessee, Knoxville, students interested in the MS with a major in child and family studies [teacher-licensure (PreK-3) concentration] must apply for admission to graduate study through the procedures outlined above. Application for admission to teacher licensure (PreK-3) is a part of the application process to the graduate program and is described in the Undergraduate Catalog. Admission to teacher-licensure (PreK-3) is concurrent with admission to the child and family studies master's program. The teacher-licensure (PreK-3) concentration requires 36 credit hours of course work, a practice-based review of research, and the edTPA (Teacher Performance Assessment).

Required Comprehensive Exam: a practice-based review of research, and the edTPA (Teacher Performance Assessment).

Rationale: It is necessary to uncouple the edTPA from the comprehensive exam requirements for our students in the Teacher Licensure (TL) concentration in the Child and Family Studies Master's program for the following reasons: (a) Doing so brings our TL concentration in alignment with requirements in the TPTE department, and (b) Makes the comprehensive exam requirements consistent in the TL concentration with the CFS research and application concentration for students who choose a practicum rather than a thesis.

Impact on Other Units: The proposed change does not drop or alter courses required by other programs. Financial Impact: The change will not require additional resources.

DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

Student Learner Outcomes

(EDAM) EDUCATIONAL ADMINISTRATION

MS Degree in Educational Administration

1. Students will illustrate mastery of the core knowledge of the Pre-K-12 school leadership field, as guided by the professional standards.
2. Students will demonstrate the skills and dispositions required for Pre-K-12 school leadership licensing.

EdS Degree in Education

1. Students will illustrate mastery of the core knowledge of the Pre-K-12 school leadership field, as guided by the professional standards.
2. Students will demonstrate the skills and dispositions required for Pre-K-12 school leadership licensing.
3. Students will produce independent action research, located in a school setting, demonstrating the ability to design research studies, collect and analyze data, and communicate findings

PhD Degree in Education with a concentration in Leadership Studies

1. As student matriculates through program, student will design and present original research at national and/or regional venue and publish at least one scholarly article.
2. Students will propose independent research, demonstrating the ability to design and defend research proposals.

(ELPS) EDUCATIONAL LEADERSHIP AND POLICY STUDIES

MS Degree in Educational Administration

1. Students will illustrate mastery of the core knowledge of the Pre-K-12 school leadership field, as guided by the professional standards.
2. Students will demonstrate the skills and dispositions required for Pre-K-12 school leadership licensing.

EdS Degree in Education

1. Students will illustrate mastery of the core knowledge of the Pre-K-12 school leadership field, as guided by the professional standards.
2. Students will demonstrate the skills and dispositions required for Pre-K-12 school leadership licensing.
3. Students will produce independent action research, located in a school setting, demonstrating the ability to design research studies, collect and analyze data, and communicate findings

PhD Degree in Education with a concentration in Leadership Studies

1. As student matriculates through program, student will design and present original research at national and/or regional venue and publish at least one scholarly article.
2. Students will propose independent research, demonstrating the ability to design and defend research proposals.

ϕ DROP CONCENTRATION – EDUCATIONAL ADMINISTRATION MAJOR, MS

LEADERSHIP ACADEMY CONCENTRATION

In the 2019-2020 Graduate Catalog, drop the Leadership Academy concentration and all related text. Leadership Academy will now be listed as a specialization in the program.

Rationale: The VOLS Lead program was previously listed in the catalog as the degree program for Educational Administration. When the Leadership Academy was added to our program, we listed it as a concentration under the MS degree program. Since Leadership Academy and the V.O.L.S. program are both principal preparation programs (one online and one face-to-face) this has caused some confusion for students who apply for admissions to the programs. We would like to drop Leadership Academy as a concentration and add it as a specialization to the Educational Administration program.

Impact on Other Units: There is no impact on other units as this revision only includes clarifying language and consistency of headings and tables across programs. Financial Impact: There is no financial impact as this revision only includes clarifying language and consistency of headings and tables across programs. Additional Documentation: This change does not require additional documentation as this is a revision that only includes clarifying language and consistency of headings and tables across programs.

REVISE PROGRAM TEXT AND REQUIREMENTS – EDUCATIONAL ADMINISTRATION MAJOR, MS

In the 2019-2020 Graduate Catalog, remove current catalog text and replace with the following, which includes heading and text for the Leadership Academic specialization.

Educational Administration Major, MS
Volunteer Online Leadership Studies (V.O.L.S.) specialization
The University of Tennessee's educational administration program offers a Master of Science with a major in educational administration with licensure and non-licensure alternatives. The coursework is delivered in an online format through distance education.

Licensure Alternative
The M.S. program requires 36 credit hours of graduate course work. Evening and summer classes are combined with on-the-job internship activities organized around real school problems. The school principal and a faculty representative of the Educational Administration and Supervision program together supervise the internship.

The desired outcome of the program leading to licensure as a school administrator is to produce thoughtful principal and supervisory practitioners with the skills and scholarship to provide quality leadership to the organizations they serve. Graduates are expected to have a vision of quality education combined with good leadership skills to lead our schools in the twenty-first century.

The program leading to licensure as a school administrator is designed around the standards developed by the Professional Standards for Educational Leader (PSEL) for the knowledge and skills required today for a school principal. It meets the certification requirements of the Tennessee State Board of Education. The program is also accredited by the National Council for the Accreditation of Teacher Education (NCATE) and recognized by the University Council for Educational Administration (UCEA) indicating national recognition as a quality program.

Courses for this program are offered online through Distance Education. Program completion and recommendation for licensure requires a final comprehensive examination, a minimum competency score on the School Leader Licensure Assessment, and the submission professional learning portfolio.

Non-licensure Alternative
The non-licensure alternative program is designed to prepare leaders for a variety of settings in schools and in other social service agencies. Course of study is consistent with the degree program selected; however, two electives are required in lieu of an internship. The non-licensure alterative is required for all out of state students. Program completion requires a final comprehensive examination.

Admission
A completed online application must be received by both the Office of Graduate Admissions and the Department of Educational Leadership and Policy Studies, educational administration program. A grade point average (GPA) of 2.7 or higher for undergraduate work or GPA 3.2 or higher for prior graduate work is required. Applicants to the Master of Science program must possess teacher or school-related licensure; have three years teaching experience or experience working in schools; and must interview with an admission committee. Candidates for the educational administration major must possess leadership potential preferably demonstrated by previous leadership experience. Three rating forms must be provided with recommendations from three present or former employers that identify a candidate's strengths, weaknesses, and leadership potential. Interviews with applicants are held each year starting in April. Courses officially start in June.

Requirements	**Credit Hours**
Core Requirements (EDAM 513, EDAM 515, EDAM 548, EDAM 552)	12
Specialization (EDAM 523, EDAM 554, EDAM 583, EDAM 544, EDAM 519)	15
Research: (EDAM 520)	3
Internship: (EDAM 580 required for licensure students)	6
Total Credit Hours	**36**

Leadership Academy specialization
The Leadership Academy, offers a 15-month intensive leadership preparation program that offers a Master of Science degree with a major in Educational Administration or a Specialist in Education degree with a major in Education (concentration in Educational Administration). Students (called "Fellows") in the Leadership Academy must be available on Monday through Thursday of each week for an intensive internship experience under the direction of a school mentor (e.g., the school principal). On Fridays, classes are conducted in order to complete the required curriculum and meet the knowledge and skill standards for initial certification as a beginning school leader. Admission to the Leadership Academy is highly selective. Information about the Leadership Academy and the application process can be obtained from cel.utk.edu.

The Master of Science degree with a major in Educational Administration, specialization in Leadership Academy, requires 33 credit hours of graduate coursework. The internship, which includes a minimum of 400 hours of field-based experience under the mentor's direction, is supervised through course EDAM 570. A final comprehensive examination is required and includes a minimum competency score on the School Leader Licensure Assessment, the submission and presentation of a professional learning portfolio (PLP) and an action research paper on a topic relevant to educational leadership.

Requirements	**Credit Hours**
Core requirement courses (EDAM 563, EDAM 588, EDAM 567, EDAM 574	12
Specialization courses (EDAM 587, EDAM 585, EDAM 578, EDAM 576, EDAM 572	15
Research course (EDAM 565)	3
Internship course (EDAM 570)	3
Total Credit Hours	**33**

Formerly: The University of Tennessee's educational administration program offers a Master of Science with a major in educational administration with licensure and non-licensure alternatives. The coursework is delivered in an online format through distance education.

Licensure Alternative
The M.S. program requires 36 hours of course work. Evening and summer classes are combined with on-the-job internship activities organized around real school problems. The school principal and a faculty representative of the Educational Administration and Supervision program together supervise the internship.

The desired outcome of the program leading to licensure as a school administrator is to produce thoughtful principal and supervisory practitioners with the skills and scholarship to provide quality leadership to the organizations they serve. Graduates are expected to have a vision of quality education combined with good leadership skills to lead our schools in the twenty-first century.

The program leading to licensure as a school administrator is designed around the standards developed by the Interstate School Leaders Licensure Consortium (ISLLC) for the knowledge and skills required today for a school principal. It meets the certification requirements of the Tennessee State Board of Education. The program is also accredited by the National Council for the Accreditation of Teacher Education (NCATE) and recognized by the University Council for Educational Administration (UCEA) indicating national recognition as a quality program.

Courses for this degree are offered online through Distance Education.

Non-licensure Alternative
The non-licensure alternative program is designed to prepare leaders for a variety of settings in schools and in other social service agencies. It requires a common set of four courses with the remainder of the program tailored to the students' special needs. The degree requires 36 hours of course work and may require an internship, which is decided in consultation with the faculty advisor.

Admission
A completed online application must be received by both the Office of Graduate Admissions and the Department of Educational Leadership and Policy Studies, educational administration program. A grade point average (GPA) of 2.7 or higher for undergraduate work or GPA 3.2 or higher for prior graduate work is required. Applicants to the Master of Science program must possess teacher or school-related licensure; have, or will have, by program completion three years teaching experience or experience working in schools; and must interview with an admission committee. Candidates for the educational administration major must possess leadership potential preferably demonstrated by previous leadership experience. Three rating forms must be provided with recommendations from three present or former employers that identify a candidate's strengths, weaknesses, and leadership potential. Interviews with applicants are held each year starting in April. Courses officially start in June.

Requirements	Hours Credit
Core Requirements (EDAM 513, EDAM 515, EDAM 548, EDAM 552)	12
Specialization (EDAM 523, EDAM 554, EDAM 583, EDAM 544, EDAM 519)	15
Research: EDAM 520	3
Internship: (EDAM 580 required for licensure students)	6
Total	36

Rationale: The VOLS Lead program was previously listed in the catalog as the degree program for Educational Administration. When the Leadership Academy was added to our program, we listed it as a concentration under the MS degree program. Since Leadership Academy and the V.O.L.S. program are both principal preparation programs (one online and one face-to-face) this has caused some confusion for students who apply for admissions to the programs. We would like to drop Leadership Academy as a concentration and add it as a specialization to the MS Educational Administration program.

Impact on Other Units: There is no impact on other units as this revision only includes clarifying language and consistency of headings and tables across programs. Financial Impact: There is no financial impact as this revision only includes clarifying language and consistency of headings and tables across programs.

REVISE PROGRAM REQUIREMENTS – EDUCATION MAJOR, PHD – LEADERSHIP STUDIES IN EDUCATION CONCENTRATION

In the 2019-2020 Graduate Catalog, remove current program requirements and replace with the following:

	Credit Hours
Research Foundation	15
Core Requirements	6
Leadership Foundation	12
Specialization	12
Cognate	6
Dissertation	24
Total	75

Formerly:	Credit Hours
Research Area	15
Core Requirements (minimum of)	12
Concentration	18
Cognate	6
Dissertation	24
Total	75

Rationale: In an effort to ensure consistency and clarity throughout the ELPS materials in the Graduate Catalog, this section was revised. To accomplish this, department faculty requested rearranging courses in the core requirements and Leadership Foundation sections. Courses were neither deleted nor added, only rearranged under the headings.

Impact on Other Units: There is no impact on other units as this revision only includes clarifying language and consistency of headings and tables across programs. Financial Impact: There is no financial impact as this revision only includes clarifying language and consistency of headings and tables across programs. Additional Documentation: This change does not require additional documentation as this is a revision that only includes clarifying language and consistency of headings and tables across programs.

REVISE REQUIREMENTS – HIGHER EDUCATION ADMINISTRATION MAJOR, PHD

In the 2019-2020 Graduate Catalog, revise the admissions deadline date and requirements as follows:

1. Admissions: Under "Admission" heading, replace the "March 1st" deadline with a "February 1st" deadline. The sentence should now read as follows: "The deadline for having a complete admissions credential file is February 1st."

Formerly: The deadline for having a complete admissions credential file is March 1st.

2. Requirements: Under the "Requirements" heading, first sentence, revise the hours of coursework to "48". The sentence should now read as follows:
   "The program requires completion of approximately 48 credit hours of graduate coursework (exclusive of dissertation enrollment), completion of a written and oral comprehensive examination (an overall GPA of 3.5 is required to take the comprehensive examination), and successful completion and defense of a dissertation."

Formerly: The program requires completion of approximately 48-57 hours of coursework (exclusive of dissertation enrollment), completion of a written and oral comprehensive examination (an overall GPA of 3.5 is required to take the comprehensive examination), and successful completion and defense of a dissertation

Rationale: In an effort to ensure consistency and clarity throughout the ELPS materials in the Graduate Catalog, this section was revise to reflect the current number of hours required of coursework and the change in the application deadline is consistent with deadline of other programs.

Impact on Other Units: There is no impact on other units as this revision only includes clarifying language and consistency of headings and tables across programs. Financial Impact: There is no financial impact as this revision only includes clarifying language and consistency of headings and tables across programs. Additional Documentation: This change does not require additional documentation as this is a revision that only includes clarifying language and consistency of headings and tables across programs.

REVISE PROGRAM TEXT AND REQUIREMENTS – EDUCATION MAJOR, EDS – EDUCATIONAL ADMINISTRATION CONCENTRATION

In the 2019-2020 Graduate Catalog, remove current text and replace with heading, text and requirements for the "Volunteer Online Leadership Studies (VOLS Lead) specialization".

The department offers a concentration in Educational Administration under the Specialist in Education degree with a major in education. This degree is designed for individuals who already possess a master's degree in education. Exceptions may be made only by the faculty of the program to which the student is applying. This degree may be used to fulfill the course requirements for obtaining licensure as a school administrator.

Education Major, EdS – Educational Administration concentration
(Volunteer Online Leadership Studies (VOLS Lead) specialization)

The Specialist in Education degree, with a major in Education, concentration in educational administration with a specialization in Volunteer Online Leadership Studies requires 42 credit hours of graduate coursework, which includes a field based internship experience under a mentor's direction. The internship is supervised through EDAM 580. A final comprehensive examination is required and includes a minimum competency score on the School Leader Licensure Assessment, the submission and presentation of a professional learning portfolio (PLP) and an action research paper on a topic relevant to educational leadership. The coursework will be delivered in an online format through distance education.

Licensure Alternative
The EdS requires 42 credit hours of graduate course work. Evening and summer classes are combined with on-the-job internship activities organized around real school problems. The school principal and a faculty representative of the educational administration and supervision program together supervise the internship.

The desired outcome of the program leading to licensure as a school administrator is to produce thoughtful principal and supervisory practitioners with the skills and scholarship to provide quality leadership to the organizations they serve. Graduates are expected to have a vision of quality education combined with good leadership skills to lead our schools in the twenty-first century.

The program leading to licensure as a school administrator is designed around the standards developed by the State of Tennessee, The Tennessee Instructional Leadership Standards (TILS), and Professional Standards for Educational Leaders (PSEL) the knowledge and skills required today for a school principal. It meets the certification requirements of the Tennessee State Board of Education. The program is also accredited by the National Council for the Accreditation of

Teacher Education (NCATE) and recognized by the University Council for Educational Administration (UCEA) indicating national recognition as a quality program.

Courses for this degree are offered online through Distance Education. Program completion and recommendation for licensure requires a final comprehensive examination, a minimum competency score on the School Leader Licensure Assessment, the submission professional learning portfolio and a field problem research paper on a topic relevant to educational leadership.

Non-licensure Alternative
The non-licensure alternative program is designed to prepare leaders for a variety of settings in schools and in other social service agencies. Course of study is consistent with the degree program selected; however, two electives are required in lieu of an internship. The non-licensure alterative is required for all out of state students. The degree requires 42 credit hours of graduate course work and may require an internship, which is decided in consultation with the faculty advisor. Program completion and recommendation for licensure requires a final comprehensive examination and a field problem research paper on a topic relevant to educational leadership.

Admission
Application forms should be completed and submitted prior to April. These include the online application to the Office of Graduate Admissions and for those interested in licensure, the Educational Specialist application. A graduate GPA of 3.2 or higher, documentation of teaching or related experience (a minimum of three years of school-related experience is needed for licensure as a school administrator), and three rating forms that assess a candidate's strengths, weaknesses, leadership, and scholarly potential are required.

Requirements
The EdS with a major in education with a concentration in educational administration requires a minimum of 42 credit hours of graduate study.

	Credit Hours
Core Requirements (EDAM 515, EDAM 513, EDAM 548, EDAM 552)	12
Licensure specialization (EDAM 523, EDAM 554, EDAM 583, EDAM 544, EDAM 519)	15
Research (EDAM 520, EDAM 592), Elective: EDAM 521	9
Internship: (EDAM 580 required for licensure students) or electives non-licensure students	6
Total	**42**

Formerly:
The department offers a concentration in Educational Administration under the Specialist in Education degree with a major in education. This degree is designed for individuals who already possess a master's degree in education. Exceptions may be made only by the faculty of the program to which the student is applying. This degree may be used to fulfill the course requirements for obtaining licensure as a school administrator. The coursework will be delivered in an online format through distance education.

Licensure Alternative
The EdS requires 42 hours of course work. Evening and summer classes are combined with on-the-job internship activities organized around real school problems. The school principal and a faculty representative of the educational administration and supervision program together supervise the internship.

The desired outcome of the program leading to licensure as a school administrator is to produce thoughtful principal and supervisory practitioners with the skills and scholarship to provide quality leadership to the organizations they serve. Graduates are expected to have a vision of quality education combined with good leadership skills to lead our schools in the twenty-first century.

The program leading to licensure as a school administrator is designed around the standards developed by the State of Tennessee, The Tennessee Instructional Leadership Standards (TILS), and the Interstate School Leaders Licensure Consortium (ISLLC) for the knowledge and skills required today for a school principal. It meets the certification requirements of the Tennessee State Board of Education. The program is also accredited by the National Council for the Accreditation of Teacher Education (NCATE) and recognized by the University Council for Educational Administration (UCEA) indicating national recognition as a quality program.

Courses for this degree are offered online through Distance Education.

Non-licensure Alternative
The non-licensure alternative program is designed to prepare leaders for a variety of settings in schools and in other social service agencies. It requires a common set of four courses with the remainder of the program tailored to the students' special needs. The degree requires 42 hours of course work and may require an internship, which is decided in consultation with the faculty advisor.

Admission
Application forms should be completed and submitted prior to April. These include the online application to the Office of Graduate Admissions and for those interested in licensure, the Educational Specialist application. A graduate GPA of 3.2 or higher, documentation of teaching or related experience (a minimum of three years of school-related experience is needed for licensure as a school administrator), and three rating forms that assess a candidate's strengths, weaknesses, leadership, and scholarly potential are required.

Requirements
The EdS with a major in education with a concentration in educational administration requires a minimum of 42 credit hours of study. A final comprehensive examination is required as is a culminating research paper or thesis depending on the program.

Core Requirements (EDAM 515, EDAM 513, EDAM 548, EDAM 552)	12
Licensure specialization (EDAM 523, EDAM 554, EDAM 583, EDAM 544, [1]EDAM 519)	15

OR

Non-licensure specialization (selected by the student and advisor) Research (EDAM 520, [2]EDAM 592), [3]Electives: EDPY 577	9
Internship: (EDAM 580 required for licensure students) or electives non-licensure students	6
Total hours	42

[1] EDAM 519 or an approved curriculum course.
[2] A thesis option is available with approval of advisor.
[3] Additional electives from outside the Educational Administration area chosen in consultation with advisor.

REVISE PROGRAM TEXT AND REQUIREMENTS FOR THE LEADERSHIP ACADEMY SPECIALIZATION FOR THE EDUCATION MAJOR, EDS, EDUCATIONAL ADMINISTRATION CONCENTRATION

In the 2019-2020 Graduate Catalog, remove current text and requirements for the Leadership Academy specialization and replace with the following:

Education Major, EdS – Educational Administration concentration
(Leadership Academy specialization)

The Specialist in Education degree, with a major in Education, concentration in educational administration with a specialization in leadership academy requires 39 credit hours of graduate coursework and an internship, which includes a minimum of 400 hours of field-based experience under the mentor's direction. The internship is supervised through EDAM 570. Program completion and recommendation for licensure requires a minimum competency score on the School Leader Licensure Assessment, the submission professional learning portfolio and an action research paper in lieu of a comprehensive exam on a topic relevant to educational leadership.

	Credit Hours
Core Requirement (EDAM 563, EDAM 588, EDAM 567, EDAM 574)	12
Specialization (EDAM 587, EDAM 585, EDAM 578, EDAM 576, EDAM 572)	15
Research (EDAM 565, EDAM 592, EDAM 530)	9
Internship (EDAM 570)	3
Total credit hours required	**39**

Formerly: The Specialist in Education degree, with a major in Education, concentration in educational administration with a specialization in leadership academy requires 39 hours of coursework and an internship, which includes a minimum of 400 hours of field-based experience under the mentor's direction. The internship is supervised through EDAM 570. A final comprehensive examination is required and includes a minimum competency score on the School Leader Licensure Assessment, the submission and presentation of a professional learning portfolio (PLP) and an action research paper on a topic relevant to educational leadership.

Core Requirement courses (EDAM 563, EDAM 588, EDAM 567, EDAM 574)	12
Specialization courses (EDAM 587, EDAM 585, EDAM 578, EDAM 576, EDAM 572)	15
Research courses (EDAM 565, EDAM 592, [1]EDPY 577)	9
Internship course (EDAM 570)	3
Total hours required	39

1 Alternate research elective from outside educational administration must be chosen in consultation with advisor.

Rationale: For the changes to the Education Major, EdS – Educational Administration concentration (Volunteer Online Leadership Studies specialization): The VOLS Lead program was previously listed in the catalog as the degree program for Educational Administration. When the Leadership Academy was added to our program, we listed it as a specialization under the degree program. This has caused problems for students who apply for admissions. Since Leadership Academy was the only specialization available students checked it. As a result, students applied for the incorrect program. We would like to add VOLS Lead as a specialization so that during the application process, students can more clearly understand the options available.

Professional licensing standards for school leaders has changed from the Interstate School Leader Licensure Consortium Standards (ISLLC) to the Professional Standards for School Leaders (PSEL). The wording in this section has changed to indicate the change in standards. The change in wording under the non-licensure alternatives is to address directives from the office of Distance Education. Because the VOLS Lead Program serves out of state students, we must clarify to these students that we are able to offer them a degree only. We are unable to offer Tennessee Instructional Leader Licenses to them. Because the out of state students must pursue a non-license alternative which does not allow an internship, in order to meet degree requirements, they must schedule two electives.

For the changes to the Education Major, EdS – Educational Administration concentration, (Leadership Academy specialization) program text/requirements: In an effort to ensure consistency and clarity throughout the ELPS materials in the Graduate Catalog, this section was revised. The concentration of the Leadership Academy was dropped and the program was added to the Education EdS Program with an Educational Administration Concentration. There are no new or changed information, only clarifying language as well as consistency of headings and tables across programs.

Impact on Other Units: For the changes to the Education Major, EdS – Educational Administration concentration (Volunteer Online Leadership Studies specialization): The impact on other units may be one to two out of state students during the fall semester will register for a distance education course in their unit.

For the changes to the Education Major, EdS – Educational Administration concentration, (Leadership Academy specialization) program text/requirements: There is no impact on other units as this revision only includes clarifying language and consistency of headings and tables across programs. Financial Impact: There is no financial impact for other units as they may refuse register for courses that are full. There is no financial impact for ELPS department as the revisions are wording clarifications.

REVISE DEPARTMENT INFORMATION PAGE – EDUCATIONAL LEADERSHIP AND POLICY STUDIES

In the 2019-2020 Graduate Catalog, revise the major, degree, and concentration listing as follows:

Higher Education Administration	PhD
Education	PhD
Leadership Studies in Education concentration	
Educational Leadership	EdD
Education	EdS
Educational Administration concentration	
Leadership Academy specialization	
Volunteer Online Leadership Studies (V.O.L.S.) specialization	
College Student Personnel	MS
Educational Administration	MS
Leadership Academy specialization	
Volunteer Online Leadership Studies (V.O.L.S.) specialization	
Graduate Certificate Program	
Educational Administration (PreK-12)	

REVISE DEPARTMENT TEXT UNDER THE "EDUCATIONAL ADMINISTRATION MAJOR" AS FOLLOWS:

EDUCATIONAL ADMINISTRATION MAJOR

Through the educational administration graduate programs, the department prepares entry-level and executive-level administrators for schools and colleges. All masters, specialist in education, and certificate coursework in the Volunteer Online Leadership Studies (V.O.L.S.) Program is delivered in an online format through distance education. The Leadership Academy is offered through a face-to-face format. Additionally, the doctoral degrees prepare faculty and scholars to serve in state, regional, and national policy and leadership positions as well as advanced school district level practitioner scholars. The graduate degree programs are designed to enrich the knowledge, skills and values requisite to effective leadership in educational practice settings.

Rationale: In an effort to ensure consistency and clarity throughout the ELPS materials in the Graduate Catalog, these sections were revised. There are no new or changed information, only clarifying language. Impact on Other Units: There is no impact on other units as this revision only includes clarifying language. Financial Impact: There is no financial impact as this revision only includes clarifying language. Additional Documentation: This change does not require additional documentation as this is a revision that only includes clarifying language.

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELING

Student Learner Outcomes

Student Learning Objectives for the PhD in Educational Psychology and Research with a concentration in Evaluation, Statistics, and Measurement

1. Students will write a scholarly review of the literature that seamlessly integrates references
2. Students will demonstrate mastery of the content in their area of academic concentration and how to apply the content in a practice setting.
3. Students will be actively engaged in their profession.

REVISE PROGRAM REQUIREMENTS – COUNSELING MAJOR, MS, CLINICAL MENTAL HEALTH COUNSELING CONCENTRATION

In the 2019-2020 Graduate Catalog, remove current list of required courses and replace with the following:

Requirements	**Credit Hours**
COUN 480, COUN 535, COUN 541, COUN 551, COUN 554, COUN 555, COUN 525, COUN 545, COUN 552, COUN 559 (9 credit hours across an academic or calendar year), COUN 556, COUN 563, COUN 570	45
SCHP 690	3
EDPY 682 - Research course	3
Three electives or a thesis (COUN 500 for 6 credit hours and one elective)	9
Total credit hours required	**60**

A Comprehensive Exam is required with a grade of Pass.

Formerly:

COUN 480, COUN 535, COUN 551, COUN 554, COUN 555, COUN 525, COUN 545, COUN 552, COUN 540, COUN 559 (9 credit hours across an academic or calendar year), COUN 556, COUN 570	42
SCHP 690	3
EDPY 550 Research course	3
Four electives or a thesis (COUN 500 for 6 credit hours and two electives)	12
Total credit hours required	60

A Comprehensive Exam is required with a grade of Pass.

REVISE PROGRAM REQUIREMENTS – COUNSELING MAJOR, MS, SCHOOL COUNSELING CONCENTRATION

In the 2019-2020 Graduate Catalog, remove current list of required courses and replace with the following:

Requirements	**Credit Hours**
COUN 480, COUN 525, COUN 535, COUN 541, COUN 545, COUN 550, COUN 551, COUN 552, COUN 554, COUN 555, COUN 558 (6 credit hours), COUN 563, COUN 565, COUN 570	45
SPED 552	3
SCHP 690	3
EDPY 682	3
Two electives as advised	6
Total credit hours required	60

A Comprehensive Exam is required with a grade of Pass.

SPED 570 also is required for students without a teaching license.

Formerly:

COUN 480, COUN 525, COUN 535, COUN 545, COUN 550, COUN 551, COUN 552, COUN 554, COUN 555, COUN 558 (6 credit hours), COUN 565, COUN 570	39
*SPED 570, *SPED 556	6
SCHP 690	3
EDPY 550	3
Three electives as advised	9
Total credit hours required	60

A Comprehensive Exam is required with a grade of Pass.

* Individuals with teaching license can substitute an elective for this course.

Rationale: After a curriculum review conducted by the program faculty, we determined that changes were needed to continue to meet the updated CACREP standards. These changes are not driven by the SACs assessment. Impact on Other Units: These changes do not impact other units. The proposed change does require a course offered by another program (ESM) and we have approval from the program coordinator. Financial Impact: This change will not impact the college or department budget. Existing faculty will teach the courses and approval has been given for courses outside our program. This change will not increase the workload of existing faculty and will not require additional resources.

DEPARTMENT OF KINESIOLOGY, RECREATION, AND SPORT STUDIES

Student Learner Outcomes

(KNS) KINESIOLOGY

MS Degree in Kinesiology

1. Students will demonstrate an understanding of key disciplinary knowledge.
2. Students will demonstrate the capability to communicate information effectively using disciplinary-appropriate mechanisms.

PhD Degree in Kinesiology

1. Students will demonstrate the ability to conduct and disseminate research.
2. Students will demonstrate mastery of discipline-specific knowledge.
3. Students will demonstrate teaching proficiency.

(RSM) RECREATION AND SPORT MANAGEMENT

MS Degree in Recreation and Sport Management

1. Students will apply sport management and therapeutic recreation principles in professional settings.
2. Students will demonstrate an understanding of the foundational knowledge and skills needed in the sport management and therapeutic recreation fields.
3. Students will be able to conduct research and understand its importance in the decision-making process.

PhD Degree in Recreation and Sport Management

1. Students will demonstrate the ability to conduct and disseminate research.
2. Students will demonstrate mastery of discipline-specific knowledge.
3. Students will demonstrate teaching proficiency.

REVISE PROGRAM REQUIREMENTS – RECREATION AND SPORT MANAGEMENT MAJOR, MS, SPORT MANAGEMENT CONCENTRATION

In the 2019-2020 Graduate Catalog, revise footnote 1 to add “RSM 514”. Footnote 1 should now read as follows:

[1]RSM 510, RSM 512, RSM 514, RSM 515, RSM 530, RSM 540, RSM 544, RSM 550, RSM 554, RSM 555, RSM 560, RSM 570, RSM 580.

Rationale: The new RSM 514 need to be included in the list of acceptable department and program electives. Impact on Other Units: The addition of the courses will not have an impact on units outside of the RSM Major. Financial Impact: No financial impact on department or college budgets’ anticipated. Additional Documentation: No additional approvals are needed.

REVISE PROGRAM REQUIREMENTS – RECREATION AND SPORT MANAGEMENT MAJOR, MS, THERAPEUTIC RECREATION CONCENTRATION

In the 2019-2020 Graduate Catalog, revise the course listing under the non-thesis and thesis options as follows:

1) For the non-thesis option, revise the first line of courses, replacing "RSM 594" with "RSM 405". The list will now read as follows:

   RSM 405, RSM 511, RSM 515, RSM 521, RSM 522, RSM 525 18

2) For the thesis option, revise the first line of courses, replacing "RSM 594" with "RSM 405". The list will now read as follows

   RSM 405, RSM 511, RSM 515, RSM 521, RSM 522, RSM 525, 18

Rationale: The revision of the program requirements reflects the changes in the course add and drop shown above. Impact on Other Units: The addition of the courses will not have an impact on units outside of the Recreation and Sport Management Major. Financial Impact: There is no financial impact to the Department or College budgets. These courses will be delivered as part of the normal teaching load of existing faculty in the Recreation and Sport Management major. Additional Documentation: No additional approvals are needed. Please see course add of RSM 405 for graduate credit and course drop of RSM 594.

DEPARTMENT OF NUTRITION

Student Learner Outcomes

(NUTR) NUTRITION

Learning objectives for the MS in Nutrition

1) By the time of program completion, students enrolled in the master's degree program will demonstrate readiness for professional employment in the discipline.
2) Upon completing the program, students who have completed the dietetic internship option will have demonstrated the ability to understand, interpret, and apply the science of nutrition in individual, clinical, and community settings.
3) Upon completing the program, students in the public health nutrition concentration will have demonstrated the ability to apply public health nutrition skills in community settings.

Learning objectives for the PhD in Nutritional Sciences

1) Upon completing the program, the student will have the ability to interpret, critique, and synthesize research literature in nutrition.
2) Upon completing the program students will have demonstrated the ability to communicate and disseminate research findings.
3) Upon completing the program, the student will have demonstrated the ability to write a NIH-formatted specific aims and research strategy for a grant proposal and to submit a grant proposal for research funding.
4) Upon completing the program, the student will attain a nutrition-related position appropriate to doctoral-prepared program graduates.

+ ADD CONCENTRATION – NUTRITION MAJOR, MS

Clinical Nutrition and Dietetics Concentration

In the 2019-2020 Graduate Catalog, add the heading, text, and requirements for the new Clinical Nutrition and Dietetics concentration.

Clinical Nutrition and Dietetics concentration

- Clinical nutrition and dietetics students must have completed the BS in Nutrition, Dietetics concentration, at the University of Tennessee with the inclusion of HRT 445 and NUTR 426.
- Clinical nutrition and dietetics students must take NUTR 513, NUTR 514, NUTR 516, NUTR 520, NUTR 524, NUTR 525, NUTR 526, NUTR 527, and NUTR 530.
- 3 credit hours of AGNR 480.
- A culminating experience is required. This culminating experience will be fulfilled upon successful completion of NUTR 520.

Rationale: This provides a description of this new concentration, available only to students completing the Dietetics Concentration of our undergraduate program who successfully apply during the summer before their senior year. This new concentration is not directly relevant to the SLOs. Rather it addresses specific competencies outlined by our accrediting body that pertain only to students in the proposed new concentration.

Impact on Other Units: This proposal was reviewed by the department and, during this one year of coursework, there is an impact on other units. Specifically, we are requiring these students to take AGNR 480. Documentation has been provided, indicating support for NUTR students to enroll in AGNR 480 (John Stier, Associate Dean and Professor, Herbert College of Agriculture).

Financial Impact: The addition of this new concentration will affect the department budget. We will be hiring two new faculty members over the course of the two year roll out. These costs will be covered by program fees paid by students entering this new MS

concentration (proposed below). These fees have been approved by the Senior Vice Chancellor for Finance and Administration. The department is not planning on asking for any additional resources to support these changes.

Additional Documentation: Because this change will impact the College of Agriculture, a letter of support from John Stier, Associate Dean and Professor is available. No additional approvals are required for this change. The addition of a new concentration does not need to be reported to SACSCOC.

REVISE PROGRAM REQUIREMENTS – DUAL MS-MPH PROGRAM – NUTRITION / PUBLIC HEALTH MAJOR

In the 2019-2020 Graduate Catalog, under the Requirements heading, revise the second sentence as follows:

1) replace "PUBH 555" with "PUBH 552";
2) revise the minimum number of graduate credit hours to "59"; and
3) strike the "(depending on the program of interest)" text.

The sentence should now read as follows:

"All candidates for the dual degree must successfully complete PUBH 510, PUBH 537, and PUBH 552; 2 credit hours (1 credit hour each) of PUBH 509 and NUTR 509; and a minimum of 59 graduate credit hours, which includes core MPH courses and required MS courses (may also include thesis hours)."

Formerly:
All candidates for the dual degree must successfully complete PUBH 510, PUBH *537*, and PUBH *555*; 2 credit hours (1 credit hour each) of PUBH 509 and NUTR 509; and a minimum of *56-59* graduate credit hours (depending on the program of interest), which includes core MPH courses and required MS courses (may also include thesis hours).

Rationale: These changes to the MS/MPH Dual program requirements reflect changes to the Community Health Education (CHE) concentration in the MPH program, being proposed concurrently by the Public Health faculty (see PUBH narrative in this document). Because these changes affect the Dual Program requirements (i.e., both the MS/MPH Dual and the MPH/MS Dual programs), both departments are putting an identical change forward so that the "Requirements" text matches in both places in the catalog. Briefly, Public Health is replacing PUBH *555* with PUBH *552* in their core requirements, and adding one course to their Community Health Education (CHE) concentration. Because this will result in an equivalent minimum requirement of 59 hours for students in both MPH concentrations (Health Policy Management (HPM) or CHE), we are striking the variable credit hours and the reference to dependence on program of interest. This change does not address any of the MS SLOs.

Impact on other units: This change will impact students in the MS/MPH Dual Program (called the MPH/MS Dual Program in Public Health's materials). The PUBH faculty has worked closely with the NUTR faculty, and both faculty agree on these proposed changes. The head of the Department of Nutrition has provided a letter of support for these changes, which is included in materials submitted by PUBH. Financial Impact: This change does not fiscally impact the Nutrition Department.

REVISE NUTRITION DEPARTMENT INFORMATION PAGE

In the 2019-2020 Graduate Catalog, revise the Nutrition Department Information page, as follows:

The Master of Science program is available with a major in nutrition and concentrations in cellular and molecular nutrition, public health nutrition, and clinical nutrition and dietetics.

Nutrition and dietetics education leading to credentialing as a Registered Dietitian Nutritionist (RDN) at the University of Tennessee, Knoxville

The Department of Nutrition within the College of Education, Health, and Human Sciences is the administrative base for the university's preparation of credentialed Registered Dietitian Nutritionists (RDNs). The University of Tennessee currently is home to two nutrition and dietetics education programs leading to RDN credentialing, both of which are accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics, 120 S. Riverside Plaza, Suite 2190, Chicago, Illinois 60606-6995, (312)899-0040 ext. 5400, https://www.eatrightpro.org/acend. The Didactic Program in Dietetics (DPD) is completed through successful completion of the nutrition major with a dietetics concentration and culminates in a bachelor's degree. Graduates from this program are eligible to apply for ACEND-accredited supervised practice programs to gain the structured practice experience required to take the national credentialing examination (Registration Examination for Dietitians) and become RDNs. The Dietetic Internship (DI) is open to incoming and current nutrition graduate students who have successfully completed a DPD and who are selected through a competitive application process. In 2018, the Department was selected by ACEND to develop a Future Education Model Graduate Program, which will begin to be phased in effective Fall 2020 following ACEND review of a phase 2 report in Spring 2020. This program represents a reorganization of the current Dietetic Internship and will integrate traditional coursework with practice-based courses that enable students to complete a bachelor's degree (Bachelor of Science in Nutrition-Dietetics) and master's degree (Master of Science in Nutrition with a concentration in Clinical Nutrition and Dietetics) in five years and be eligible to take the RDN credentialing examination upon graduation. Students admitted to this master's program concentration do not enroll in graduate coursework during the four years of the bachelor's degree program, but graduate study commences with the summer term immediately following graduation.

Admission to MS in Nutrition with concentrations in cellular and molecular nutrition or public health nutrition, MS-MPH, and PhD degree programs

A complete file for review includes the Graduate Application for Admission, completed departmental application form, Graduate Record Examination (GRE) scores for the general section, and three Graduate Rating Forms completed by individuals who can attest to the applicant's potential for graduate education. A link to the Graduate School's electronic application process, along with application due dates, can be found on the department website. Admission into the graduate program in the department is dependent on completion of undergraduate courses that give the necessary background for success in the graduate program, and include: general and organic chemistry, physiological chemistry/biochemistry, physiology, statistics and introductory* nutrition. Details regarding the minimum semester credit hours expected for each prerequisite are available in the Graduate Student Handbook on the department's website. Applicants to all programs with related research interests and experience will be given preference.

*For those lacking only the introductory nutrition prerequisite, the student will be required to complete this or a similar class upon admission to our program.

Admission to MS in Nutrition with a concentration in clinical nutrition and dietetics

A student intending to enter the Master of Science program in Nutrition with a concentration in Clinical Nutrition and Dietetics is required to complete coursework in the Nutrition-Dietetics concentration for the first three years of undergraduate study. At this point, students must apply for the Master of Science program and be accepted into the Clinical Nutrition and Dietetics concentration in order to enroll in specific prerequisite upper-division courses that will establish the knowledge and skill set necessary for the transition to graduate study and for meeting of ACEND-required competencies. Students who do not enroll in the Master of Science program may still complete the Bachelor of Science in Nutrition-Dietetics and the Didactic Program in Dietetics. Admission requirements for the Master of Science program with a concentration in Clinical Nutrition and Dietetics include at minimum:

1. Academic achievement
    a. Cumulative GPA: 3.3 (encompasses all college coursework).
    b. Nutrition coursework: completion of NUTR 100, 302, 311, 313, 314, 315, 316, 320 with grades of B- or better in all NUTR-prefix courses.
    c. Science coursework: completion of CHEM 120, 130, 260; BCMB 230; MICR 210 with a 3.0 or higher overall GPA in the sciences.
    d. Other non-departmental coursework: CLAS 273; CMST 240; ENGL 295 or 360; approved FDSC course, KNS 350; PSYC 110; PUBH 201; STAT 201; university general education requirements.
2. Standardized test performance - GRE with recommended scores of 150 (verbal), 150 (quantitative), and 4.0 (analytical) or higher in order to be competitive.
3. Submission of an online application for admission to the Graduate School by August 1 prior to the senior year of undergraduate study in the Nutrition-Dietetics Concentration. The completed application must include current transcripts, a personal statement detailing experience as well as long- and short-term goals, and a resume. No recommendation forms are required.
4. In-person interview with the program director and representatives of the program faculty in August shortly following the application deadline.

Admission decisions will be based upon meeting of listed admission criteria as well as completeness of application, clarity of written and oral expression, and expressed interest in pursuing a career as a RDN. Admission is competitive and students accepted to the Master of Science program in Nutrition with a concentration in Clinical Nutrition and Dietetics are required to follow the Nutrition-Dietetics concentration curriculum during the fourth year of the undergraduate program with the addition of HRT 445 and NUTR 426 Clinical Nutrition II Practicum and complete the Bachelor of Science degree. To maintain good academic standing for entry into the Master of Science program, students must complete all required coursework and maintain GPA and grade minimums specified in the admission criteria.

Formerly:
The Master of Science program is available with a major in nutrition and concentrations in cellular and molecular nutrition or public health nutrition.

A graduate degree combined with a Dietetic Internship (DI) beyond the baccalaureate degree qualifies the graduate to apply for the Registration Examination to become a Registered Dietitian (RD). Students may learn more from the department about the Dietetic Internship from the departmental website. The Dietetic Internship is currently granted accreditation by the Accreditation Council for Education in Nutrition and Dietetics of the Academy of Nutrition and Dietetics, 120 S. Riverside Plaza, Chicago, Illinois 60606-6995, (312) 899-0040, HTTP://www.eatright.org/ACEND. Students may also select from related minors including exercise physiology or interdisciplinary minor programs in statistics or epidemiology.

Admission
A complete file for review includes the Graduate Application for Admission, completed departmental application form, Graduate Record Examination (GRE) scores for the general section, and three Graduate Rating Forms completed by individuals who can attest to the applicant's potential for graduate education. A link to the Graduate School's electronic application process, along with application due dates, can be found on the department website. Admission into the graduate program in the department is dependent on completion of undergraduate courses that give the necessary background for success in the graduate program, and include: general and organic chemistry, physiological chemistry/biochemistry, physiology, statistics and introductory* nutrition. Details regarding the minimum semester hours expected for each prerequisite are available in the Graduate Student Handbook on the department's website. Applicants to all programs with related research interests and experience will be given preference.

*For those lacking only the introductory nutrition prerequisite, the student will be required to complete this or a similar class upon admission to our program.

Rationale: These changes reflect the addition of our newly proposed concentration (Clinical Nutrition and Dietetics) and describe who qualifies for admission to that concentration (i.e., only students applying from our undergraduate dietetics concentration).

Impact on Other Units: This concentration is only available to students matriculating through our undergraduate dietetics concentration, who apply and are accepted the summer before their senior year. At the graduate level, there are no impacts on other units.

Financial Impact: The addition of this new concentration will affect the department budget. We will be hiring two new faculty members over the course of the two year roll out. These costs will be covered by program fees paid by students entering this new MS concentration (proposed below). These fees have been approved by the Senior Vice Chancellor for Finance and Administration. The department is not planning on asking for any additional resources to support these changes.

DEPARTMENT OF PUBLIC HEALTH

Student Learner Outcomes
Learning objectives for the MPH Program

1. Students will demonstrate readiness for professional practice in health-related settings.
2. Students will demonstrate critical thinking & problem-solving abilities reflecting the integration of public health competencies.
3. Students will develop effective presentation skills.
4. Students will appraise mastery of 22 core public health competencies.

REVISE PROGRAM REQUIREMENTS – PUBLIC HEALTH MAJOR, MPH

In the 2019-2020 Graduate Catalog, under requirements revise as follows:

1) in footnote 1, replace “PUBH 555” with “PUBH 552”. Footnote 1 should now read as follows:

[1] Public Health Foundation courses: PUBH 509 (2 credit hours.) PUBH 510, PUBH 520, PUBH 530, PUBH 537, PUBH 540, PUBH 552.

2) In footnote 2, replace “PUBH 552” with “PUBH 555, PUBH 556”. Footnote 2 should now read as follows:

[2] Community Health Education: PUBH 536, PUBH 550, PUBH 555, PUBH 556.

3) In footnote 4, delete/remove “PUBH 588”. Footnote 4 should now read as follows:

[4] Internship: PUBH 587. Written guidelines stipulating eligibility criteria and expectations are available.

Rationale: The changes described above bring consistency across the catalog. The changes are based on revised accreditation criteria and an intensive two-year process of review and curriculum development. The changes reflect input from students, alumni, industry representatives and curricular development specialists. Impact on Other Units: The courses listed above are required by MS (Nutrition)-MPH, DVM-MPH and JD-MPH dual degree programs. The coordinators of each program have reviewed the changes and determined there is no impact. Financial impact: The changes to the curriculum demand no new resources. All courses will be taught by current faculty. Additional Documentation: The changes noted above require no additional approval, they do not reflect a substantive change.

REVISE PROGRAM REQUIREMENTS – FOOD SAFETY GRADUATE CERTIFICATE

In the 2019-2020 Graduate Catalog, revise the Food Safety Graduate as follows:

1. revise the number of required graduate credit hours from 12 to 13.

“Ten of the 13 graduate credit hours required for the certificate may also count as graduate degree credit hours.”

2. Add a new sentence to the end of the paragraph to state the certificate may be earned completely online. The end of the paragraph should now read as follows:

“...research, program evaluation, and advocacy. Certificate may be earned completely online.”

3. For “Required Courses”, revise the number of credit hours to “(10 credit hours)” and revise the second bullet point to replace “CEM 508 (2)” with “CEM 508 (3)”. The “Required Courses” section should now read as follows:

Required Courses (10 credit hours):

- FDSC 421; (3)
- Web-based course CEM 508 (3) OR web-based course CEM 507 (3)
- PUBH 540; (3)
- PUBH 541, (1) (PUBH 541 is cross-listed with FDSC 541 and CEM 541)

Rationale: The changes described above reflect the changes made to the Veterinary Public Health concentration for the 2018-2019 graduate catalog. The changes assure consistency throughout the catalog. It also reflects the addition of an online elective making the certificate completely available online. Impact on Other Units: There is no anticipated impact other units. Financial impact: No financial impact, courses are taught by current faculty. Additional Documentation: No additional approval is needed for the changes.

REVISE PROGRAM REQUIREMENTS – DUAL MS-MPH PROGRAM – NUTRITION / PUBLIC HEALTH MAJOR

In the 2019-2020 Graduate Catalog, revise the Requirements text, as follows:

Under the Requirements heading, in the first paragraph, revise the second sentence to replace "PUBH 555" with "PUBH 552"; revise the minimum number of graduate credit hours to "59"; and strike the "(depending on the program of interest)" text. The second sentence of the paragraph should now read as follows:

"All candidates for the dual degree must successfully complete PUBH 510, PUBH 537, and PUBH 552; 2 credit hours (1 credit hour each) of PUBH 509 and NUTR 509; and a minimum of 59 graduate credit hours, which includes core MPH courses and required MS courses (may also include thesis credit hours)."

Rationale: These changes to the MS/MPH Dual program requirements reflect changes to the Community Health Education (CHE) concentration in the MPH program, being proposed concurrently by the Nutrition faculty (see NUTR narrative in this document). Because these changes affect the Dual Program requirements (i.e., both the MS/MPH Dual and the MPH/MS Dual programs), both departments are putting an identical change forward so that the "Requirements" text matches in both places in the catalog. Briefly, Public Health is replacing PUBH 555 with PUBH 552 in their core requirements, and adding one course to their Community Health Education (CHE) concentration. Because this will result in an equivalent minimum requirement of 59 hours for students in both MPH concentrations (Health Policy Management (HPM) or CHE), we are striking the variable credit hours and the reference to dependence on program of interest. This change does not address any of the MS SLOs.

Impact on other units: This change will impact students in the MS/MPH Dual Program (called the MPH/MS Dual Program in Public Health's materials). The PUBH faculty has worked closely with the NUTR faculty, and both faculty agree on these proposed changes. The head of the Department of Nutrition has provided a letter of support for these changes, which is included in materials submitted by PUBH. Financial Impact: This change does not fiscally impact the Nutrition Department.

REVISE DEPARTMENT OF PUBLIC HEALTH INFORMATION PAGE

In the 2019-2020 Graduate Catalog, under the "Health Policy Graduate Certificate" replace the first three sentences of the paragraph with new text. The "Health Policy Graduate Certificate" section should now read as follows:

Health Policy Graduate Certificate
The College of Nursing offers an interdisciplinary graduate certificate program in health policy in collaboration with the Department of Public Health, College of Education, Health, and Human Sciences and the College of Law. Concurrently-enrolled University of Tennessee graduate students from all disciplines and community members with a Master's degree or higher with an interest in issues related to health and health care are eligible to apply to the graduate certificate program in health policy. The aim of the program is to prepare leaders, practitioners, researchers, and educators from law, nursing, public health, and other disciplines to be active in various policy-making activities. Course experiences will foster the examination and application of current policy research and the development of skills related to policy analysis, research, program evaluation, and advocacy. Course experiences will foster the examination and application of current policy research and the development of skills related to policy analysis, research, program evaluation, and advocacy.

Formerly:
The College of Nursing and Department of Public Health - College of Education, Health, and Human Sciences jointly offer a graduate certificate in health policy to prepare nursing and public health leaders, researchers, and educators to be active in all aspects of policymaking relative to health. The certificate program is designed to build upon and expand concepts from core courses of the curriculum of each discipline's masters' degree programs and the previous experiences and interests of students. Certificate candidates must currently be admitted to a graduate program at the university or hold a terminal degree and be a graduate student in good standing and comply with all other applicable academic policies. Course experiences will foster the examination and application of current policy research and the development of skills related to policy analysis, research, program evaluation, and advocacy.

Rationale: The changes described above reflect the changes initiated by the College of Nursing (program administrator) and the Graduate School. The changes assure consistency throughout the catalog. Impact on Other Units: There is no anticipated impact on our or other units. Financial impact: No financial impact, courses are taught by current faculty. Additional Documentation: No additional approval is needed for the changes.

DEPARTMENT OF THEORY AND PRACTICE IN TEACHER EDUCATION

Student Learner Outcomes

MS Track I Learner Outcomes (Educational Studies Concentration and Practitioner Concentration))

1. Demonstrates rich understanding of subject(s) taught and appreciation of how knowledge in subject area(s) is created, organized, and linked to real-world settings.
2. Demonstrates the ability to reason and to take multiple perspectives.
3. Demonstrates quality of writing that is expected of advanced graduate students.

MS Track II Learner Outcomes (Professional Internship Concentration)

1. The candidate understands the central concepts, tools of inquiry, structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students. (Corresponds to InTASC Standard 1)
2. The candidate understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners. (Corresponds to InTASC Standard 3)
3. The candidate understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills. (Corresponds to InTASC Standard 4)

EdS Learner Outcomes

1. Demonstrate an adoption of an experimental and problem-solving orientation
2. Critically examine own practice and adapt teaching to new findings, ideas, and theories
3. Demonstrate quality of writing that is expected of advanced graduate students

World Savvy Certificate Learner Outcomes

1. Students will understand that world events and global issues are complex and interdependent.
2. Students will understand that multiple conditions fundamentally affect diverse global forces, events, conditions, and issues
3. Students will develop values and attitudes that include (but are not limited to) a self-awareness about identity and culture, and sensitivity and respect for differences
4. Students will develop skills that include (but are not limited to) investigating global issues by framing questions, analyzing and synthesizing relevant evidence
5. Students will develop behaviors that include (but are not limited to) seeking out and applying an understanding of different perspectives to problem solving and decision making

+ ADD CONCENTRATION – TEACHER EDUCATION MAJOR, MS

Applied Behavior Analysis (ABA) concentration

In the 2019-2020 Graduate Catalog, add the Applied Behavior Analysis (ABA) concentration under the Teacher Education Major, MS.

Rationale: The Applied Behavior Analysis Concentration is specifically designed to meet coursework requirements of our Behavior Analyst Certification Board Verified Course Sequence, and we feel that the increasing demand for Board Certified Behavior Analysts supports the need for the proposed ABA Concentration. The ABA Concentration will be an option for students who are interested in applied behavior analysis or working with children and adults with disabilities—but are not necessarily interested in becoming a licensed special education teacher or already hold a teaching license.

Impact on Other Units: The addition of the concentration, Applied Behavior Analysis, does require courses offered through EPC. They are all existing and frequently offered courses, and we do not anticipate any negative impacts on department resources. A letter of support was received from Dr. Merilee McCurdy, School Psychology Program Coordinator.

Financial Impact: For the Applied Behavior Analysis Concentration, the addition of a new course (SPED 501; 3 credit hours) would likely require funds to pay for an instructor to teach the course, particularly if offered in the summer. We feel that this course would "make" each year. And, this course could be taught by current faculty in Special Education or School Psychology, or it could be taught by an adjunct (a local BCBA with expertise in managing a clinic, supervising personnel, etc.). Dr. Sherry Bell (TPTE Department Chair) is aware of our request for this new course to be a part of the ABA Concentration, and has indicated the department can cover the cost of SPED 501 if necessary.

REVISE THE TEACHER EDUCATION MAJOR, MS – TO ADD A SPECIALIZATION TO THE EDUCATIONAL STUDIES CONCENTRATION

American Sign Language Education specialization

REVISE THE TEACHER EDUCATION MAJOR, MS – TO DROP A SPECIALIZATION FROM THE EDUCATIONAL STUDIES CONCENTRATION

Science education (informal education) specialization

REVISE PROGRAM TEXT – TEACHER EDUCATION MAJOR, EDS

In the 2019-2020 Graduate Catalog, revise the first paragraph, to add a new last sentence as follows:

The concentration in Educational Technology is offered as an online program only via Distance Education.

The paragraph will now read:

The department offers a Specialist in Education degree with a major in teacher education. This degree is designed for those students who already possess a master's degree in education. Exceptions may be made only by the faculty of the program to which the student is applying. The Specialist in Education with a major in teacher education encompasses concentrations in educational technology; elementary education; English education; literacy education; mathematics

education; science education; social science education; special education; teaching and learning; and World Language/ESL education. The concentration in Educational Technology is offered as an online program only via Distance Education.

Rationale: There is need for the EDS in Teacher Education with a concentration in Educational Technology (ETEC) to be delivered online to meet the demand of teachers across the state. Teachers seeking this program have inquired about an online option. The online option will allow us to recruit teachers across the state of Tennessee as well as recruit student from surrounding states.

Impact on Other Units: This program may result in students enrolling in courses offered by Ed Leadership and Ed Psych. The department has communicated with these units regarding the possibility of needing specific sections of courses offered in their programs for the EdS students – they are in agreement. The departments will offer the necessary courses if there is a small number of students. If the number increases, the instructor will be paid through DE funds. The DE funds will go to the department offering the course. Hopefully there will be students in other graduate programs who will want to enroll in one or more courses.

Financial Impact: This change should not impact the department or college financially. The program was already in place; faculty who are in place will teach the courses. In addition, a new faculty member has been added who will teach in the concentration.

REVISE PROGRAM TEXT AND REQUIREMENTS – TEACHER EDUCATION MAJOR, MS

In the 2019-2020 Graduate Catalog, for the Teacher Education Major, MS, replace the entire page with revised text. The Teacher Education Major, MS text and requirements should now read as follows:

The Master of Science with a major in Teacher Education offers Professional Internship concentrations that lead to teacher licensure. The Professional Internship concentrations are designed for students seeking initial teacher licensure in several concentrations and a master's degree in Teacher Education.

Licensure may also be sought through the Practitioner concentration, which is designed for students who are earning an initial teaching credential while serving as an instructor of record in a school. In areas of teacher shortage, state licensure requirements allow a partnership school system (or private school) to employ an individual as "instructor of record," provided content/subject knowledge has been met, and the candidate has been admitted to an approved educator preparation program. The teacher would enter a graduate-level teacher licensure program, while carrying out the duties and responsibilities of a first-year teacher, with school system and UT faculty as mentors. The teacher has three years to complete licensure requirements. The Tennessee Department of Education's Office of Educator Licensing will issue the license only at the recommendation of the approved educator preparation program. Contact the Office of Advising and Student Services for more information (http://cehhsadvising.utk.edu/licensure/).

The department also offers a concentration in Educational Studies. The Educational Studies concentration does not lead to initial teacher licensure. This concentration is designed for students who hold a valid Tennessee teaching license, for those wishing to enhance their professional knowledge and expertise, for those preparing to teach on the post-secondary level, or for those preparing for careers that do not require teacher licensure. Depending on the student's program of study, this concentration may lead to an additional endorsement area for an already licensed teacher.

In addition, the Applied Behavior Analysis Concentration is designed for students interested in completing coursework to prepare them to use behavior-analytic techniques in applied settings, with a particular focus on treatment approaches for children and adults with learning or behavioral difficulties. This Applied Behavior Analysis Concentration is ideal for students who already have a background in special education or in working with children with disabilities or other learning or behavioral difficulties, but who already have or are not interested in teacher licensure.

The Master of Science in Teacher Education offers thesis and non-thesis options and require students to submit a written comprehensive examination. In addition, students completing theses must sit for an oral examination of their theses.

Admission
For all programs, students must meet all current graduate school admission requirements, departmental requirements, and program requirements in addition to submitting a graduate school and departmental application. Three letters of recommendation are also required for the Educational Studies concentration.

Professional Internship Initial Licensure concentrations
The Professional Internship concentrations are intended for individuals seeking initial teacher licensure. Applicants to any of the professional internship concentrations must first interview with a teacher education admissions board and be admitted to teacher education. Individuals are encouraged to contact the college's Student Services Center, A332 Bailey Education Complex, for a diagnostic interview and to develop a tentative course of study and time line.

Requirements
Teacher Education, MS: Professional Internship concentrations common course requirements
Master's Internship concentrations are 36 graduate credit hours (non-thesis); 42 graduate credit hours (thesis). Students, regardless of teaching concentration (e.g., elementary, secondary, etc.), complete a common teacher licensure core of 24 graduate credit hours during the Professional Internship year (see below). For non-thesis master's degree students, successful completion of a comprehensive exam with a grade of Pass is required.

Professional Internship Year common core courses (24 credit hours)

- TPTE 574 (2-3), TPTE 575 (12), TPTE 591 (3-4), concentration specific courses as approved by advisor (6).

Additional course concentration requirements to earn a master's degree (12 credit hours)
In addition to the Professional Internship Year common core courses listed above, students must complete an additional 12 credit hours of graduate coursework that is unique to their concentration field to earn a master's degree. Additional courses required for each concentration are listed below.

Art Education Professional Internship concentration
ARED 510, ARED 520, ARED 530, ARED 540.

ASL Education Professional Internship concentration
Candidates need a minimum score of Advanced level on SLPI or 4 on ASLPI.
ASL 421 (offered summer semester only), ASL 422, ASL 545, ENED 509 or REED 543.

Education of the Deaf and Hard of Hearing Professional Internship concentration
Research elective (3); non-specified electives (9).

Elementary Education Professional Internship concentration
6 credit hours chosen from MEDU 530, REED 530, SCED 531, or SSCE 521, 6 credit hours of educational electives chosen from historical, philosophical, or social foundations; educational technology; reading education; language arts education; science education; social science education; elementary education; issues in teacher education.

English as a Second Language Education Professional Internship concentration
TPTE 517; advisor approved graduate electives (9).

English Education Professional Internship concentration
TPTE 517 and 9 graduate credit hours of specialty area electives (see faculty advisor).

Mathematics Education Professional Internship concentration
TPTE 517 and 9 graduate credit hours of specialty area electives (see faculty advisor).

Mathematics Grades 6-8 Education Professional Internship concentration
TPTE 517; REED 543; 6 graduate credit hours of electives (see faculty advisor).

Science Education Professional Internship concentration
TPTE 517 and 9 graduate credit hours of specialty area electives (see faculty advisor).

Science Grades 6-8 Education Professional Internship concentration
TPTE 517; REED 543; 6 graduate credit hours of electives (see faculty advisor).

Social Sciences Education Professional Internship concentration
TPTE 517 and 9 graduate credit hours of specialty area electives (see faculty advisor).

Special Education Professional Internship concentration
SPED 553; SPED 530; 6 graduate credit hours of electives (see advisor).

World Language Education Professional Internship concentration
TPTE 517; ETEC 586 or ETEC 587 (or approved graduate educational technology course); approved graduate class in the World Language; WLEL 445 and WLEL 455 (Teaching World Languages, PreK-5).

Educational Studies Concentration
The Educational Studies concentration with a major in Teacher Education encompasses specializations in American Sign Language Education, Art Education, Cultural Studies of Educational Foundations, Education of the Deaf and Hard of Hearing, Elementary Education, English Education, Literacy Education, Mathematics Education, Science Education, Social Science Education, Special Education, Teaching and Learning, and World Language/ESL. The Educational Studies concentration also offers a Distance Education specialization in Science, Technology, Engineering and Mathematics with an optional endorsement in Gifted Education. The Educational Studies concentration MS degree does not lead to initial teacher licensure, but depending on the student's program of study, may lead to an additional endorsement area for an already licensed teacher. It is for students seeking to enhance their professional knowledge and expertise, for those preparing to teach on the post-secondary level, or for those preparing for careers that do not require teacher licensure. Thesis and non-thesis options are available as are specializations in several subject and specialty areas. Both the thesis and non-thesis options require students to submit a written comprehensive examination and 2/3 of total credit hours must be 500-level or above. In addition, students completing theses must sit for an oral examination of their theses.

Thesis: Minimum 33 graduate credit hours, satisfactory completion of written thesis and oral defense of thesis; 2/3 of total credit hours for MS degree must be 500-level or above.

Non-Thesis: Minimum 33 graduate credit hours, satisfactory completion of written comprehensive examination; 2/3 of total credit hours for MS must be 500-level or above.

Thesis option	**Credit Hours**
* Core Area	9
Specialization Area	12
Related Studies	6
Thesis (6 credits of TPTE 500)	6
All classes must be approved by major advisor.	
Total credit hours	**33**

* TPTE 517; EDPY 505, EDPY 506, EDPY 550, EDPY 577, EDPY 583, or other approved research course; ETEC 586, ETEC 587, or other approved educational technology course.

Non-Thesis Option
Non-Thesis: Minimum 33 credit hours of approved graduate coursework and satisfactory completion of written and/or oral comprehensive examination. Two-thirds of the total credit hours for the MS must be 500-level courses or above.

Non-Thesis option	**Credit Hours**
* Core Area	9
Specialization Area	12
Related Studies	12
All classes must be approved by major advisor.	
Total credit hours	**33**

* TPTE 517; EDPY 505, EDPY 506, EDPY 550, EDPY 577, EDPY 583, or other approved research course; ETEC 586, ETEC 587, or other approved educational technology course.

Practitioner Concentration
The Practitioner concentration leads to licensure in high needs content areas, math education, science education, special education, world languages, and English as a second language. It is designed for students who are earning an initial teaching credential while serving as an instructor of record in a school. In areas of teacher shortage, state licensure requirements allow a partnership school system (or private school) to employ an individual as "instructor of record," provided content/subject knowledge has been met, and the candidate has been admitted to an approved educator preparation program (EPP). The student would enter as a graduate-level teacher EPP, while carrying out the duties and responsibilities of a first-year teacher, with school system and UT faculty as mentors, and has three years to complete licensure requirements. The Tennessee Department of Education's Office of Educator Licensing will issue the license only at the recommendation of the approved educator preparation program. Contact the Office of Advising and Student Services for more information (http://cehhsadvising.utk.edu/licensure/).

The Practitioner concentration common core courses are listed below. Students must complete an additional 12 credit hours of graduate coursework that is unique to their concentration field to earn a master's degree.

EDPY 401 (3), ETEC 586 (3), SPED 402 (3), SPED 552 (3), EDUC 576 (4-7), Concentration specific courses (6-12).

Applied Behavior Analysis (ABA) Concentration
The Teacher Education, MS; Applied Behavior Analysis (ABA) concentration is designed to prepare practitioners to use behavior-analytic techniques and treatment approaches to prevent and reduce problem behaviors and to increase appropriate behaviors and skills targeted to improve overall quality of life. The ABA concentration coursework is comprised of courses in Special Education and School Psychology programs. Content in this program of studies is primarily focused on treatment approaches for children and adults with learning or behavioral difficulties and their teachers and caregivers. Completion of the Teacher Education, MS; ABA concentration requires a total of 30 graduate credit hours.

Admission to the Teacher Education, MS; ABA concentration will be based on applicant GRE scores, grade point average at all collegiate levels, written goal statement, example of professional writing, background check clearance, professional references, and admission board interview.

Requirements (21 credit hours)
Must complete the following courses:

EDPY 636 Ethical, Legal, and Professional Issues in Psychology and Behavior Analysis (3)*
EDPY 515 Educational Applications of Behavioral Theories of Learning (3)*
EDPY 517 Direct Assessment and Intervention for Academic Skills Deficits (3) *
SPED 530 Applied Behavior Analysis in School Settings (3)*
SPED 555 Methods of Teaching Students with Autism Spectrum Disorders (3)*
SPED 501 Advanced Topics in Applied Behavior Analysis (3)*

In consultation with advisor, select one of the following courses:

EDPY 505 Quasi-Experimental and Single-Subject Design Research (3)*
SPED 603 Reading and Applying Research for Diverse Learners: Single-Subject Approaches (3)*

Electives (9 credits)
In consultation with advisor, select from the following courses and/or other relevant graduate-level course(s) approved by advisor:

EDPY 510 Psychological Theories of Human Development (3)
EDPY 516 Educational Applications of Cognitive Learning Theories (3)
SCHP 690 Psychopathology of Childhood (3)
SPED 553 Assessment of Exceptional Students (3)
SPED 542 Methods of Teaching Students with Emotional and Behavioral Disorders (3)
SPED 552 Classroom Management (3)

Total 30 credit hours

* Note: To complete the coursework required for board certification in behavior analysis, students must complete EDPY 515, EDPY 517, EDPY 636, SPED 555, SPED 530, SPED 501, and either EDPY 505 or SPED 603. An international certifying board specifies and updates additional requirements (e.g., completing supervised internship experience, completing exam) for board certification which are outside of coursework included in the Teacher Education, MS; ABA concentration.

Formerly:
The Master of Science with a major in Teacher Education offers Professional Internship concentrations that lead to teacher licensure. The Professional Internship concentrations are designed for students seeking initial teacher licensure in several concentrations and a master's degree in Teacher Education.

Licensure may also be sought through the Practitioner concentration, which is designed for students who are earning an initial teaching credential while serving as an instructor of record in a school. In areas of teacher shortage, state licensure requirements allow a partnership school system (or private school) to employ an individual as "instructor of record," provided content/subject knowledge has been met, and the candidate has been admitted to an approved educator preparation program. The teacher would enter a graduate-level teacher licensure program, while carrying out the duties and responsibilities of a first-year teacher, with school system and UT faculty as mentors. The teacher has three years to complete licensure requirements. The Tennessee Department of Education's Office of Educator Licensing will issue the license only at the recommendation of the approved educator preparation program. Contact the Office of Advising and Student Services for more information (http://cehhsadvising.utk.edu/licensure/).

The department also offers a concentration in Educational Studies. The Educational Studies concentration does not lead to initial teacher licensure. This concentration is designed for students who hold a valid Tennessee teaching license, for those wishing to enhance their professional knowledge and expertise, for those preparing to teach on the post-secondary level, or for those preparing for careers that do not require teacher licensure. Depending on the student's program of study, this concentration may lead to an additional endorsement area for an already licensed teacher.

The Master of Science in Teacher Education offers thesis and non-thesis options and require students to submit a written comprehensive examination. In addition, students completing theses must sit for an oral examination of their theses.

Admission
For all programs, students must meet all current graduate school admission requirements and departmental requirements in addition to submitting a graduate school and departmental application. Three letters of recommendation are also required for the Educational Studies concentration.

Professional Internship Initial Licensure concentrations
The Professional Internship concentrations are intended for individuals seeking initial teacher licensure. Applicants to any of the professional internship concentrations must first interview with a teacher education admissions board and be admitted to teacher education. Individuals are encouraged to contact the college's Student Services Center, A332 Bailey Education Complex, for a diagnostic interview and to develop a tentative course of study and time line.

Requirements
Teacher Education, MS: Professional Internship concentrations common course requirements
Master's Internship concentrations are 36 graduate credit hours (non-thesis); 42 graduate credit hours (thesis). Students, regardless of teaching concentration (e.g., elementary, secondary, etc.), complete a common teacher licensure core of 24 graduate credit hours during the Professional Internship year (see below). For non-thesis master's degree students, successful completion of a comprehensive exam with a grade of Pass is required.

Professional Internship Year common core courses (24 credit hours)
TPTE 574 (2-3), TPTE 575 (12), TPTE 591 (3-4), concentration specific courses as approved by advisor (6).

Additional course concentration requirements to earn a master's degree (12 credit hours)
In addition to the Professional Internship Year common core courses listed above, students must complete an additional 12 credit hours of graduate coursework that is unique to their concentration field to earn a master's degree. Additional courses required for each concentration are listed below.

Art Education Professional Internship concentration
ARED 510, ARED 520, ARED 530, ARED 540.

ASL Education Professional Internship concentration
Candidates need a minimum score of Advanced level on SLPI or 4 on ASLPI.
ASL 421 (offered summer term only), ASL 422, ASL 545, ENED 509 or REED 543.

Education of the Deaf and Hard of Hearing Professional Internship concentration
Research elective (3); non-specified electives (9).

Elementary Education Professional Internship concentration
6 credit hours chosen from MEDU 530, REED 530, SCED 531, or SSCE 521, 6 credit hours of educational electives chosen from historical, philosophical, or social foundations; educational technology; reading education; language arts education; science education; social science education; elementary education; issues in teacher education.

English as a Second Language Education Professional Internship concentration
TPTE 517; advisor approved electives (9).

English Education Professional Internship concentration
TPTE 517, TPTE 549, TPTE 588 or an elective in the history of sociology or philosophy of education; 6 credit hours of specialty area electives (see faculty advisor).

Mathematics Education Professional Internship concentration
TPTE 517; TPTE 549, TPTE 588 or an elective in the history of sociology or philosophy of education; 6 credit hours of specialty area electives (see faculty advisor).

Mathematics Grades 6-8 Education Professional Internship concentration
TPTE 517; REED 543; 6 credit hours of electives (see faculty advisor).

Science Education Professional Internship concentration
TPTE 517; TPTE 549, TPTE 588 or an elective in the history of sociology or philosophy of education; 6 credit hours of specialty area electives (see faculty advisor).

Science Grades 6-8 Education Professional Internship concentration
TPTE 517; REED 543; 6 credit hours of electives (see faculty advisor).

Social Sciences Education Professional Internship concentration
TPTE 517; TPTE 549, TPTE 588 or an elective in the history of sociology or philosophy of education; 6 credit hours of specialty area electives (see faculty advisor).

Special Education Professional Internship concentration
SPED 553, SPED 556; 6 credit hours of electives (see advisor).

World Language Education Professional Internship concentration
TPTE 517; ETEC 586or ETEC 587 (or approved educational technology course); approved graduate class in the World Language; WLEL 445and WLEL 455 (Teaching World Languages, PreK-5).

Educational Studies Concentration
The Educational Studies concentration does not lead to initial teacher licensure but, depending on the student's program of study, may lead to an additional endorsement area for an already licensed teacher. It is for students seeking to enhance their professional knowledge and expertise, for those preparing to teach on the post-secondary level, or for those preparing for careers that do not require teacher licensure. Thesis and non-thesis options are available as are specializations in several subject and specialty areas. Both the thesis and non-thesis options require students to submit a written comprehensive examination and 2/3 of total credit hours must be 500-level or above. In addition, students completing theses must sit for an oral examination of their theses.

Thesis: Minimum 30 graduate credit hours, satisfactory completion of written thesis and oral defense of thesis; 2/3 of total hours for MS degree must be 500-level or above.

Non-Thesis: Minimum 33 graduate credit hours, satisfactory completion of written comprehensive examination; 2/3 of total hours for MS must be 500-level or above.

Art Education Specialization
Advising Note for Thesis and Non-Thesis Options

An exhibition, instead of a thesis, must be of work directed by art and art education faculty. The artwork must be completed while pursuing the master's degree. A written paper must accompany the exhibition.

Art Education (Thesis Option)	**Credit Hours**
[1] Core	6
[2] Concentration	18
Theory and Practice in Teacher Education TPTE 500 (Thesis)	6
Total	30

[1] Theory and Practice in Teacher Education TPTE 517, Educational Psychology EDPY 577, or other approved research design course.
[2] Art Education ARED 510, ARED 520, ARED 530, ARED 540; art history 400- or 500-level (3); studio art courses 400- or 500-level (3).

Art Education (Non-Thesis Option)	**Credit Hours**
[1] Core	6
[2] Concentration	21
500-Level Electives	6
Total	33

[1] TPTE 517; EDAM 520; EDPY 550, EDPY 577, or other committee approved research design.
[2] ARED 510, ARED 520, ARED 530, ARED 540; art history 400- or 500-level (3); studio art courses 400- or 500-level (3); TPTE 593 or TPTE 595.

Cultural Studies of Educational Foundations Specialization (thesis or problems option)
The concentration's intellectual identity emerges from a post-disciplinary orientation which includes coursework and research across the traditions of anthropology, history, philosophy, psychology, sociology, and women's studies. Academically based community service, community based participatory research, and philosophical, ethnographic, and feminist inquiry in the program coursework address fundamental issues in education and relations of power.

Requirements	**Credit Hours**
[1] Concentration	15
[2] Specialization (choose one)	9
[3] Research	6

[4] Thesis or Problems in Lieu of Thesis	6
Total	36

[1] CSE 591, CSE 592. Select two from CSE 504, CSE 511, CSE 539, CSE 545, CSE 549, CSE 550 OR CSE 639.
[2] Students can design their own specialization area such as gender studies in education; multicultural education; rural education; or religion, ethics and morality.
[3] Select two courses from CSE 526, EDPY 559, EDPY 506, EDPY 682, or advisor approved substitute.
[4] CSE 500 or CSE 503.

NOTE: To meet program requirements, students must select courses in consultation with a program advisor. Program totals are minimums and some students may be required to complete additional coursework to overcome background deficiencies.

Education of the Deaf and Hard of Hearing Specialization
Contact the department head for information on this concentration.

English Education, Mathematics Education, Science Education, Social Science Education, and World Language/ESL Specializations
Thesis Option
Minimum 30 credit hours of approved graduate coursework, 6 credit hours of TPTE 500, and satisfactory completion of written thesis and oral defense of thesis. Two-thirds of the total credit hours for the MS must be 500-level courses or above.

Non-Thesis Option
Non-Thesis: Minimum 33 credit hours of approved graduate coursework and satisfactory completion of written and/or oral comprehensive examination. Two-thirds of the total credit hours for the MS must be 500-level courses or above.

Non-Thesis option	**Credit Hours**
* Core Area	9
Specialization Area	12
Related Studies	12

All classes must be approved by major advisor.

* TPTE 517; EDPY 550, EDPY 577, EDAM 520, or other approved research course; ETEC 586, ETEC 587 or other approved educational technology course.

Elementary Education Specialization

Thesis Option	**Credit Hours**
[1] Core	9
Specialization	12
[2] Related Studies	3
TPTE 500	6
Total	30

[1] EDPY 577 or other approved research design course; TPTE 517; 3 credit hours determined by student and advisor.
[2] Choose from at least three areas – reading education, language arts education, mathematics education, science education, social studies education, elementary curriculum, middle school curriculum.

Non-Thesis Option	**Credit Hours**
[1] Core	12
Specialization	15
[2] Related Studies	6
Total	33

[1] EDPY 550, EDPY 577, EDAM 520, or other approved research design course; TPTE 517; 6 credit hours determined by student and advisor.
[2] Choose from at least three areas – reading education, language arts education, mathematics education, science education, social studies education, elementary curriculum, middle school curriculum.

Literacy Education Specialization

Thesis Option	**Credit Hours**
[1] Core	9
Specialization (reading education courses)	12
[2] Related Studies	3
TPTE 500	6
Total	30

[1] EDPY 577 or other approved research design course; TPTE 517; 3 credit hours determined by student and advisor.
[2] Choose 3 graduate credit hours from language arts education, English education, elementary curriculum, elementary education, middle school curriculum, special education, or educational psychology.

Non-Thesis Option	**Credit Hours**
[1] Core	12
Specialization (reading education courses)	12
[2] Related Studies	9
Total	33

[1] EDPY 550, EDPY 577, EDAM 520, or other approved research design course; TPTE 517; 6 credit hours determined by student and advisor.
[2] Choose 9 credit hours from language arts education, English education, elementary curriculum, elementary education, middle school curriculum, special education, or educational psychology.

Science Education (Informal Education) Specialization

Thesis Option	**Credit Hours**
[1] Core	9
[2] Specialization	12
[3] Related Studies	3
TPTE 500 (Thesis)	6
Total	30

[1] EDPY 577 or other approved research design course; TPTE 517; 3 credit hours determined by student and advisor.
[2] SCED 509, SCED 510; 3 credit hours determined by student and advisor.
[3] Determined by student and advisor.

Non-Thesis Option	**Credit Hours**
[1] Core	12
[2] Concentration	15
[3] Related Studies	6
Total	33

[1] EDPY 550, EDPY 577, EDAM 520, or other approved research design course; TPTE 517; 6 credit hours determined by student and advisor.
[2] SCED 509, SCED 510; 6 credit hours determined by student and advisor.
[3] Determined by student and advisor.

Science, Technology, Engineering, and Mathematics Specialization
Note: STEM offers a specialization in gifted education. Specific course selection and sequence should be determined in consultation with student's advisor. This concentration is offered via distance education (DE).

Thesis Option Only	**Credit Hours**
[1] Core	12
[2] Specialization	12
Related Studies	6
TPTE 500 (Thesis)	6
Total	36

[1] TPTE 517; TPTE 540; ETEC 586; TPTE 588
[2] SCED 572; SCED 509; MEDU 543 or SCED 543; MEDU 583 or SCED 565; ELED 524; EDDE 504 or SPED 506 (3 credit hours); SPED 574; SPED 575

Special Education Specialization

[1] Core	12
[2] Specialization	12
TPTE 500 (Thesis)	6
Total	30

[1] SPED 556; EDPY 505, SPED 590, SPED 553.
[2] Select appropriate courses with major advisor.

Courses in Gifted Education specialization are available via distance education: SPED 574; SPED 575; ELED 524; SCED 572; SPED 506. Specific course selection and sequence should be determined in consultation with the student's advisor. Gifted courses may be taken in partial fulfillment of degree requirements in other degree programs upon approval of the student's graduate committee.

Non-Thesis Option	**Credit Hours**
[1] Core	12
[2] Concentration	24
Total	36

[1] SPED 556; EDPY 505, SPED 590, SPED 553.
[2] Select appropriate courses with major advisor.

Courses in Gifted Education specialization are available via distance education: SPED 574; SPED 575; ELED 524; SCED 572; SPED 506. Specific course selection and sequence should be determined in consultation with the student's advisor. Gifted courses may be taken in partial fulfillment of degree requirements in other degree programs upon approval of the student's graduate committee.

Teaching and Learning Specialization

Thesis Option	**Credit Hours**
[1] Core	9
[2] Specialization	9
[3] Related Studies	6
TPTE 500	6
Total	30

[1] EDPY 577 or other approved research design course; TPTE 517; approved educational technology course.
[2] Faculty approved graduate courses in curriculum or instructional pedagogy.
[3] Faculty approved graduate courses in leadership, strategic planning, adult education, or other committee approved topics.

Non-Thesis Option	**Credit Hours**
[1] Core	9
[2] Specialization	12
[3] Related Studies	9

Total 30

[1] EDPY 550, EDPY 577, EDAM 520, or other approved research design course; TPTE 517; approved educational technology course.
[2] Faculty approved graduate courses in curriculum or instructional pedagogy.
[3] Faculty approved graduate courses in leadership, strategic planning, adult education, or other committee approved topics.

Practitioner Concentration
The Practitioner concentration leads to licensure in high needs content areas, math education, science education, special education, world languages, and English as a second language. It is designed for students who are earning an initial teaching credential while serving as an instructor of record in a school. In areas of teacher shortage, state licensure requirements allow a partnership school system (or private school) to employ an individual as "instructor of record," provided content/subject knowledge has been met, and the candidate has been admitted to an approved educator preparation program (EPP). The student would enter a graduate-level teacher EPP, while carrying out the duties and responsibilities of a first-year teacher, with school system and UT faculty as mentors, and has three years to complete licensure requirements. The Tennessee Department of Education's Office of Educator Licensing will issue the license only at the recommendation of the approved educator preparation program. Contact the Office of Advising and Student Services for more information (http://cehhsadvising.utk.edu/licensure/).

The Practitioner concentration common core courses are listed below. Students must complete an additional 12 credit hours of graduate coursework that is unique to their concentration field to earn a master's degree.

EDPY 401 (3), ETEC 486 (3), SPED 402 (3), SPED 557 (3), EDUC 576 (4-7), Concentration specific courses (6-12).

Rationale: The proposed change to the Professional Internship concentration is needed to accurately reflect the requirements for the concentration due to a shift in state department of education standards toward more content specific expertise. The proposed change to the Educational Studies concentration is designed to unify and streamline the requirements of the concentration. This was formerly the Track 1 program with numerous concentrations but it was changed to a single concentration (Educational Studies) with multiple specializations last year in an effort to streamline offerings at the MS level. Students historically had significant difficulty understanding differences between Track 1 and Track 2. These changes are part of a continuing effort to streamline and make the program easier to understand for students. Additionally, a state bill, HB0462/SB0524, was passed and signed into law effective 7/1/17, which allows high school students to take ASL as a foreign language. A professional internship initial licensure concentration in ASL Education was approved for the 2018 graduate catalog to accommodate persons seeking initial licensure. We would now like to add ASL Education to the list of Education Studies specializations for persons adding on an additional endorsement in this area. This will allow us to begin filling the demand in the state of TN for licensed ASL teachers, Pre K-12. We have also changed the ETEC course to a graduate level course for the Practitioner concentration common core courses as the UG ETEC 486 will no longer be available for graduate credit. The Applied Behavior Analysis Concentration is specifically designed to meet coursework requirements of our Behavior Analyst Certification Board Verified Course Sequence, and we feel that the increasing demand for Board Certified Behavior Analysts supports the need for the proposed ABA Concentration. The ABA Concentration will be an option for students who are interested in applied behavior analysis or working with children and adults with disabilities—but are not necessarily interested in becoming a licensed special education teacher or already hold a teaching license.

Impact on Other Units: The changes to these concentrations are designed to accurately reflect the requirements for the degree and to make the requirements for all students in the educational studies concentration more similar. No appreciable differences in class size or teaching load are anticipated due to any of the changes. The addition of the ASL specialization will not have any impact on other programs or courses because we already offer ASL courses to other programs, majors. The addition of the concentration, Applied Behavior Analysis, does require courses offered through EPC. They are all existing and frequently offered courses, and we do not anticipate any negative impacts on department resources. A letter of support has been provided from Dr. Merilee McCurdy, School Psychology Program Coordinator.

Financial Impact: There is no financial impact from the changes to the Professional Internship, Educational Studies, or Practitioner concentrations as these changes do not lead to any additional teaching load or additional resources. For the Applied Behavior Analysis concentration, the addition of a new course (SPED 501; 3 credit hours) would likely require funds to pay for an instructor to teach the course, particularly if offered in the summer. We feel that this course would "make" each year. And, this course could be taught by current faculty in Special Education or School Psychology, or it could be taught by an adjunct (a local BCBA with expertise in managing a clinic, supervising personnel, etc.). Dr. Sherry Bell (TPTE Department Chair) is aware of our request for this new course to be a part of the ABA concentration, and has indicated the department can cover the cost of SPED 501 if necessary.

Additional Documentation: The changes to the concentration are not substantive and do not require additional approvals nor do they need to be reported to SACSCOC. The addition of the ABA concentration does not require additional approval.

REVISE DEPARTMENT OF THEORY AND PRACTICE IN TEACHER EDUCATION INFORMATION PAGE. REVISE TEXT UNDER TEACHER EDUCATION HEADING AND DISTANCE EDUCATION HEADING:

In the 2019-2020 Graduate Catalog, revise as shown below:

TEACHER EDUCATION
The department offers programs for students seeking Tennessee Licensure in the following areas – art education (K-12); elementary teaching (K-5); English as a Second Language (PreK-12); mathematics (6-8); mathematics education; science (6-8); science education; secondary content field teaching (6-12) in English education; social sciences education; special education (K-12); special education for the deaf and hard of hearing; World Language education (PreK-12); early childhood special education endorsement; gifted education endorsement; reading endorsement. The program features a professional year internship with accompanying coursework, which may lead to a master's degree with a major in teacher education. Specialized coursework leading to a certificate in Cultural Studies in Education, Rehabilitation Counseling for the Deaf and Urban Education (in the area of urban teaching) is also available. The department also offers a program designed for students interested in applied behavior analysis.

For admission, students must meet all current graduate school admission requirements, and departmental requirements, and program requirements in addition to submitting a graduate school and departmental application. For additional information about the various programs of study and admission, write to the Student Services Center in the College of Education, Health, and Human Sciences, Bailey Education Complex A332. http://www.utk.edu/departments/advising or visit the departmental website at http://web.utk.edu/%7Etpte/.

Formerly:
The department offers programs for students seeking Tennessee Licensure in the following areas – art education (K-12); elementary teaching (K-5); English as a Second Language (PreK-12); mathematics (6-8); mathematics education; science (6-8); science education; secondary content field teaching (6-12) in English education; social sciences education; special education (K-12); special education for the deaf and hard of hearing; World Language education (PreK-12); early childhood special education endorsement; gifted education endorsement; reading endorsement. The program features a professional year internship with accompanying coursework, which may lead to a master's degree with a major in teacher education. Specialized coursework leading to a certificate in urban education is also available in the area of urban teaching.

For admission, most programs (except the Licensure Track 2 Initial Licensure/Master of Science) require current scores from the GRE general section, and all require a departmental application form and letters of recommendation. For additional information about the various programs of study and admission, write to the Student Services Center in the College of Education, Health, and Human Sciences, Bailey Education Complex A332. http://www.utk.edu/departments/advising or visit the departmental website at http://web.utk.edu/%7Etpte/.

DISTANCE EDUCATION
Courses leading to a Non-Licensure Educational Studies Master's concentration in STEM (Science, Engineering, Mathematics and Technology) with a specialization in Gifted Education are available via Distance Education.

Formerly:
Courses leading to a Non-Licensure Track 1 Master's concentration in STEM (Science, Engineering, Mathematics and Technology) with a specialization in Gifted Education are available via Distance Education.

Rationale: This change is to update the information page for the department to reflect current terminology relating to our programs and to update Distance Education program information that was approved last year as well as changes included in this year's CRC submissions. Impact on Other Units: None. This change is to correct information only. Financial Impact: None. This change is to correct information only. Additional Documentation: None required as this is just an update to the department information page.

TICKLE COLLEGE OF ENGINEERING

All Changes Effective Fall 2019

I. COURSE CHANGES

DEPARTMENT OF CHEMICAL AND BIOMOLECULAR ENGINEERING

(CBE) Chemical and Biomolecular Engineering

ADD

CBE 573 Introduction to Multifunctional Nanocomposites (3) Cross-disciplinary course covering the fundamentals of advanced nanocomposites systems including preparation, properties, characterizations, processing, and applications. The graduate students will be required to do a research survey related to his or her research topic and give a group presentation regarding the multifunctional nanocomposites.
Credit Restriction: Students cannot receive credit for both 473 and 573.
Recommended Background: CBE 201 or equivalent, CBE 250 or equivalent.

Rationale: This is a new course at the advanced undergraduate and first-year graduate student level. It will be offered as a 400-level technical elective for advanced senior undergraduate students and first-year Masters and PhD students. The CBE Department needs to introduce more new elective courses for both undergraduates and graduate students because several old ones have been dropped or archived recently due to faculty retirements.

Note: This represents a mid-impact change because it is new but is not seeking general education or experience learning approval and is not expected to be a required course for majors outside the host college. Impact on other units: None. Financial impact: None.

CBE 601 Development & Communication of Chemical and Biomolecular Engineering Research Opportunities (1) Critical review of literature, research plan design, scientific and technical proposal writing, oral presentation of scientific/technical research.
Grading Restriction: S/NC grading only.
Repeatability: May be repeated. Maximum 2 hours.
Registration Restriction: PhD students in Chemical and Biomolecular Engineering only.

Rationale: This course will provide a formal structure to PhD students preparing for their research-based qualifying exam, which is completed at the end of the semester. Impact on other units: None. Financial impact: None.

Note: This represents a mid-impact change because it is new but is not seeking general education or experience learning approval and the course is not available to students outside the CBE department.

REVISE TITLE AND DESCRIPTION, ADD RECOMMENDED BACKGROUND

CBE 551 Advanced Chemical and Biomolecular Engineering Kinetics and Reactor Design (3) Properties of catalysts; reaction mechanisms for homogeneous catalysis, heterogenous catalysis, electrocatalysis, photocatalysis, enzymatic catalysis; rate models; coupled mass, energy, and momentum balances for advanced (bio)reactor design.
Recommended Background: CBE 350 or equivalent, Calculus, Differential Equations.

Formerly:
Chemical Reactor Analysis (3) Rate models for heterogeneous reactions, properties of porous catalysts, catalyst deactivation, fluid-fluid and fluid-solid reactors.

Rationale: This course has not been taught in several years following a faculty retirement, but a significant number of graduate students currently in our department would benefit from this topic. A revised and updated syllabus has been developed, and we plan to offer the course as soon as next Spring 2019. The catalog changes will align the title and description with the revised syllabus. Impact on other units: None. Financial impact: None.

REVISE CREDIT RESTRICTION

CBE 555: Elements of Synthetic Biology and Metabolic Engineering (3)
Credit Restriction: Students cannot receive credit for both 458 and 555.

Formerly: Students cannot receive credit for both *455* and *555*.

Rationale: CBE 458 is a highly advanced course for undergraduate students, which is cross listed as a MS-level course (CBE *555*). Whereas the department needs more Honors designated courses with the archival of CBE 467, this course will now be offered as an honors course. Impact on other units: None. Financial Impact: None.

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

(CE) Civil Engineering

ADD

CE 532 Soil Slope Stability Analysis (3) Principles of limiting equilibrium, infinite slopes, design of soil slopes using Swedish circle method, Ordinary method of slices, Bishop methods, Spencer method, Chen and Morgenstern method, and an introduction to other slope stability methods. Influence of drawdown and seepage on slope stability, slope stabilization techniques, slope monitoring methods, and introduction to rock slope stability.
Recommended Background: Undergraduate Soil Mechanics equivalent to CE 331.
Registration Restriction(s): Engineering graduate or senior undergraduate standing.

Rationale: With new construction developments and limited available land in urban areas, slope stability and stabilization are becoming essential knowledge for geotechnical engineers. CE graduate students especially Tennessee Department of Transportation Engineers need to take the course for safer design of slopes. The course was taught twice as CE595 (with 34 and 24 student enrollments) and there is a need to add it. Impact on Other Units: None. Financial Impact: The course does not require additional resources or workload for faculty.

ADD AS PRIMARY CROSS-LISTED COURSE

CE 563 Fiber Reinforced Composite Materials and Mechanics (3) Underlying concepts of fiber reinforced composite materials manufacturing and structural performance. Topics include: Basic Concepts, Materials, and Processes; Elastic Behavior – Micromechanics; Strength of Unidirectional Lamina –Micromechanics; Strength of Unidirectional Lamina-Macromechanics; Elastic Behavior of Multidirectional Laminates; Overview on Hygrothermal Effects and Residual Stress.
Cross-listed: (Same as Mechanical Engineering 563).
Recommended Background: Statics, Strength of Materials.
Registration Restriction(s): Engineering graduate or senior undergraduate standing.

Rationale: With recent emphasis on fiber reinforced composites ecosystem in East Tennessee through the Composites Institute (IACMI), large use of such materials in additive manufacturing, there is a need for providing related training in this topic to the students in the Tickle College of Engineering. This course has been offered twice as a directed study class (CE 595) to date and received interest from graduate students in the Tickle College of Engineering from Civil, Mechanical, Manufacturing background. Impact on Other Units: No other existing class that covers these topics. Students from MABE take this class and is a positive impact. Financial impact: The course does not require additional resources or workload for faculty.

REVISE TITLE AND DESCRIPTION; DROP/REMOVE (DE)PREREQUISITE; ADD COMMENT, RECOMMENDED BACKGROUND, AND REGISTRATION RESTRICTION(S)

CE 530 Advanced Soil Mechanics (3) Implications of surface charge for fine-grained soils. Force balance and effective stress. Shear strength and stress-strain behavior of sands and clays. Stresses in a soil mass, stress paths, and stress-strain relationships. Capillarity, unsaturated soil, one- and two-dimensional flow for anisotropic and stratified soils, consolidation theory, drained and undrained behavior.
Recommended Background: Undergraduate Soil Mechanics equivalent to CE 331.
Comment(s): Enrollment limited to students with graduate standing.
Registration Restriction(s): Engineering graduate or senior undergraduate standing.

Formerly: Advanced Soil Mechanics and Slope Stability (3) Implications of surface charge for fine-grained soils. Force balance and effective stress. Stresses in a soil mass, stress paths, stress-strain relationships, Rankine earth pressures, and retaining walls. Capillarity, unsaturated soil, one- and two-dimensional flow, consolidation theory, drained and undrained behavior. Infinite slopes, non-circular failure surfaces, limiting equilibrium methods for evaluating stability of soil slopes, and selection of strength parameters.
(DE) Prerequisite(s): 430.

Rationale: Content related to slope stability is removed from this course and moved to a new course because there is not enough time to cover the topic in depth. Rankine earth pressures and retaining walls are covered in CE 430 and in more depth in CE 535. The proposed changes will free up time to cover fundamental soil mechanics in greater depth in CE 530. Students are expected to have knowledge of fundamental concepts of soil mechanics, but not necessarily foundation design. Impact on Other Units: None. Financial Impact: The course does not require additional resources or workload for faculty.

REVISE TO REMOVE (RE) PREREQUISITE(S); ADD RECOMMENDED BACKGROUND

CE 558 Transportation Planning Models (3)
Recommended Background: Introduction to transportation engineering equivalent to CE 355.

Formerly: (RE) Prerequisite(s): 355 or equivalent.

Rationale: Graduate students who earned BS degree from other institutions cannot register for the course because banner shows that they did not take CE 355. The proposed changes will remove registration hurdle for students to register. Impact on Other Units: None. Financial Impact: None.

CE 559 Transportation Safety (3)
Recommended Background: Introduction to transportation engineering equivalent to CE 355.

Formerly: (RE) Prerequisite(s): 355 or equivalent.

Rationale: Graduate students who earned BS degree from other institutions cannot register for the course because banner shows that they did not take CE355. The proposed changes will remove registration hurdle for students to register. Impact on Other Units: None. Financial Impact: None.

DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

(COSC) Computer Science

ADD

COSC 522 Machine Learning (3) Theoretical and practical aspects of machine learning techniques related to pattern recognition. Statistical methods studied include Bayesian and linear classifiers, support vector machines, neural networks, and unsupervised learning. Syntactic methods include grammatical inference, string matching and Markov chains. Ensemble methods include random forests, adaptive boosting, and classifier fusion.
Recommended Background: Programming, probability theory, linear algebra.

Rationale: Formerly, this course was titled COSC 528 Introduction to Machine Learning. The title has been changed to reflect that a senior level course gives an introductory overview of machine learning. The course description has been modified to reflect that more advanced topics are covered in this graduate course version. Prerequisites have been updated to reflect needed background. The course number is changed from COSC 528 to COSC 522 because this course is a prerequisite to COSC 525 and COSC 526. Impact on other units: None. Financial Impact: None.

COSC 525 Deep Learning (3) Theoretical and practical aspects of how to build deep networks for representations of high-dimensional data. Deep models for both supervised and unsupervised learning will be discussed, including convolutional neural network, autoencoder, generative adversarial network, and recurrent neural network.
Recommended Background: Machine Learning and Python Programming Language.

Rationale: Deep learning is one of the most rapidly developing areas and most sought after skills in AI. Adding this subject in our curriculum will better prepare our students for current and future job market. Deep learning has been taught as special topics course in Fall 2017 and Fall 2018 with >40 and >30 enrollment in each term. There are currently two faculty who can rotate on the course offering. Impact on other units: None. Financial Impact: None.

DROP 400-LEVEL COURSES FOR GRADUATE CREDIT (RETAINING COURSES IN THE UNDERGRADUATE CATALOG)

COSC 425 Introduction to Machine Learning (3)

Rationale: 425 is an introductory course and should not appear in the graduate catalog. Impact on other units: none. Financial impact: none.

COSC 456 Computer Graphics (3)

Rationale: 456 is co-taught with COSC 556. Students should not be able to count both COSC 456 and COSC 556 towards a graduate degree. Impact on other units: none. Financial impact: none.

DROP

COSC 528 Introduction to Machine Learning (3)

Rationale: The course number and title have changed to COSC 522 Machine Learning. A senior level course now gives an introductory overview of machine learning. The course number is changed from COSC 528 to COSC 522 because this course is a prerequisite to COSC 525 and COSC 526.

REVISE TITLE, DESCRIPTION AND RECOMMENDED BACKGROUND

COSC 526 Data Mining (3) Will focus on understanding the statistical structure of large-scale (big) datasets using machine learning (ML) algorithms. We will cover the basics of ML and study their scalable versions for implementation within distributed computing frameworks. We will pursue ML techniques such as matrix factorization, convex optimization, dimensionality reduction, clustering, classification, graph analytics and deep learning, among others. We will emphasize algorithmic development for big data mining in three different, but general scenarios: (1) when available memory is extremely large; (2) when available memory is small, but can be distributed across a cluster (e.g., cloud-like environments); and (3) when the available memory is small and data has to be analyzed “in-situ” or “online” (e.g., streaming environments). The course will be project driven with source material from a variety of real-world applications. Students will be expected to design, implement and test their ML solutions.
Recommended Background: Machine Learning.

Formerly: Introduction to Data Mining (3) A comprehensive introduction to the field of data mining. Topics covered include data preprocessing, predictive modeling (e.g., decision trees, SVM, Bayes, K-nearest neighbors, bagging, boosting), model evaluation techniques, clustering (hierarchical, partitional, density-based), classification, association analysis, and anomaly detection. Case studies from text mining, electronic commerce, social science, and bioinformatics are covered. All programming projects are student-designed (no standard packages permitted).
Recommended Background: Programming proficiency in languages such as C, C++, or Java. Knowledge of scripting languages such as Perl or Python is very beneficial.

Rationale: Data mining has advanced rapidly in the recent decade, requiring new topics be added and less important ones be removed. Removing "Introduction" from the title due to revision made to the description that reflect an in-depth discussion of how to discover knowledge from big data. Moreover data mining methods depend heavily on machine learning which is why it is added as a recommended background. This is a low impact change as it simply changes topics covered in the course to reflect new developments in this field. Impact on other units: None. Financial Impact: None.

(ECE) Electrical and Computer Engineering

ADD

ECE 548 Fundamentals of Radio and Satellite Communications Theory and Design (3) The theory and design of radio and satellite communications systems. Course topics include communications modes (AM, FM, SSB, CW, SSTV, PSK, FT8, and Digital), antenna design, weak signal radio propagation, RF safety, Software Defined Radio (SDR), and FCC regulations. Class lectures consist of presentations, labs, and demonstrations (Lectures are archived for distance learning formats).
Recommended Background: senior or graduate standing.

Rationale: The course has been taught two times, most recently in Fall 2018 as ECE 491 as a special topics course with 16 undergraduate students. The students successfully complete both two special projects and pass the Technician and General Class FCC License examinations. Students taking this course become more competitive in obtaining employment the communications field due to FCC licensure and knowledge of emerging technologies. By having an assigned number, it will be available to other departments, and therefore is expected to have a much larger undergraduate enrollment. Impact on other academic units: None. Financial impact: None, course will be taught by the current faculty.

ECE 565 Principles of Electrical Arc Flash Hazards and Explosions (3) Provides a detailed understanding of changing engineering standards for arc flash hazards and resulting explosions as covered by the U.S. Nuclear Regulatory Commission (NRC), the U.S. Department of Energy (DOE), Institute of Electrical and Electronic Engineers (IEEE), Underwriters Laboratories (UL), National Fire Protection Association (NFPA), and Occupational Safety and Health Administration (OSHA). Addresses industry standards and advanced calculation methods recommended by IEEE 1584, NFPA 70E, and OSHA during electrical power generation, transmission, and distribution. Class lectures consist of presentations, labs, and demonstrations (Lectures are archived for distance learning formats).
Recommended Background: senior or graduate standing.

Rationale: The content of this course has been covered in other existing ECE courses (ECE 563, and 567) and previously in ECE's plasma engineering courses in the early 2000's. Due to increase demand for its availability, this course will be offered in Spring 2019 as an ECE 599 class. Due to recent issues involving new industry standards, this course addresses the concerns raised by NRC, DOE, UL, NFPA, and OSHA. This course consolidates that material under one comprehensive course. The students will successfully implement projects using a U.S. Government complex high-performance computer fire model that simulate the thermal arc flash hazards and explosions. By having an assigned number, it will be available to other departments, and therefore is expected to have a much larger graduate enrollment. Class lectures consist of presentations, labs, and demonstrations (Lectures are archived for distance learning formats).Impact on other academic units: None. Financial impact: None, course will be taught by the current faculty.

ECE 646 Advanced Applications of Software-Defined Radio for Remote Sensing and Satellite Communications (3) Emerging engineering approaches for the application of Software-Defined Radio (SDR) to remote sensing using field-deployed and satellite communications systems, wireless transceiver architectures, digital communications modes, smart antennas, and remote sensing platforms for thermal, radiation, and other phenomenon using field-deployed and low earth orbit satellites. Class lectures consist of presentations, labs, and demonstrations (Lectures are archived for distance learning formats).
(RE) Prerequisite(s): 563.

Rationale: The course has been taught one time, most recently in Fall 2018 as ECE 692 as a special topics course with 11 graduate students. The students successfully complete both two special projects and pass the Technician, General, and Extra Class FCC License examinations. Students taking this course become more competitive in obtaining employment in the communications field due to FCC licensure and knowledge of emerging technologies. There is also an increased demand by industry, government, and the military for students trained in Software Defined Radio. The course will also open access to research funding agencies who are interested in these technologies. By having an assigned number, it will be available to other departments, and therefore is expected to have a much larger graduate enrollment particularly for doctoral students. Impact on other academic units: None. Financial impact: None, course will be taught by the current faculty.

ECE 661 Wildland and Hostile Fire Threats to Electrical Power Grids, Distribution, and Generation Facilities (3) The study of uncontrolled wildland fires and other hostile threats posed to the nation's critical infrastructures, particularly electrical power grids, substations, and power generation systems. Covers fire spread theory, risk mapping, ignition sources, remote sensing technologies that predict, prevent and suppress wildland fires. Class lectures consist of presentations, labs, and demonstrations (Lectures are archived for distance learning formats).
(RE) Prerequisite(s): 563.

Rationale: The course has been taught one time successfully in its current form, most recently in Fall 2018 as ECE 692, a special topics course with 11 graduate students. The impetus for this course is in direct response to the devastating impact of the Gatlinburg fires that severely compromised the power, communications, and infrastructure. The course will also open access to research funding agencies who are interested in these technologies. The students successfully implement projects using a U.S. Government complex high-performance computer fire model that simulate the thermal compromising of electrical power lines, transformers, power grids, substations, and power generation systems. By having an assigned number, it will be available to other departments (such as the Forestry, Ecology, etc.), and therefore is expected to have a much larger graduate enrollment, particularly for doctoral students. Class lectures consist of presentations, labs, and demonstrations (Lectures are archived for distance learning formats). Impact on other academic units: None. Financial impact: None, course will be taught by the current faculty.

REVISE TITLE; DROP REGISTRATION PERMISSION; ADD RECOMMENDED BACKGROUND

ECE 517 Reinforcement Learning (3)
Recommended Background: Machine Learning.

Formerly:
Registration Permission: Consent of instructor.

Rationale: Reinforcement learning is an advanced topic in machine learning, and therefore having experience in machine learning is necessary. This is a low impact change as it simply changes topics covered in the course to reflect new developments in this field. Impact on other units: None. Financial Impact: None.

REVISE TITLE, DESCRIPTION, AND (RE) PREREQUISITE(S), ADD RECOMMENDED BACKGROUND

ECE 574 Computer Vision (3) Principles of computer vision algorithms including segmentation and active contour, feature detection and matching, depth recovery from stereo, motion estimation and tracking, image classification, object detection and scene understanding.
(RE) Prerequisite(s): 572 or consent of instructor.
Recommended Background: Image Processing.

Formerly: Advanced Computer Vision (3) Principles and methods for analysis of time and/or space varying imagery. Imaging physics and color theory, shape-form-X, feature correspondence and tracking, stereo Vision, structure from motion, optical flow, motion-based segmentation, and selected topics form current literature.
(RE) Prerequisite(s): 573 or consent of instructor.

Rationale: We do not have a previous course in computer vision, so having "advanced" in the title is confusing. In addition, computer vision has advanced rapidly in recent two decades, requiring new topics to be added and less important ones to be removed or moved to be the content of Image Processing. This is a low impact change as it simply changes topics covered in the course to reflect new developments in this field. Impact on other units: None. Financial Impact: None.

REVISE (RE) PREREQUISITE(S)

ECE 583 Modeling and Control of AC Three-phase PWM Converters (3)
(RE) Prerequisite(s): 481 or consent of instructor.

Formerly:
(RE) Prerequisite(s): 482 or consent of instructor.

Rationale: The current prerequisites are not correct. The prerequisites should list ECE 481.

ENGINEERING FUNDAMENTALS

ADD

EF 501 Engineering Education Theory for Research and Practice (3) Addresses foundational principles of engineering education through relevant theories of teaching and learning, curriculum development, assessment, and student development. Broad categories of engineering courses (laboratories, design courses, and lectures) are examined with respect to course design, learning objectives, instructional methods, and assessment and accreditation.
Recommended Background: Graduate student in engineering, physical sciences, mathematics, or education.

EF 503 Engineering Instruction and Practice (3) Will learn to apply research- and theory-based educational methods to develop course materials and assess learning consistent with engineering accreditation standards. This will include discussions of specific teaching methods, pedagogical content knowledge, and the assessment and evaluation of student learning. Will use the human-centered design process as a mechanism to guide course development and continued improvement.
Recommended Background: Graduate student in engineering, physical sciences, mathematics, or education.

EF 504 Engineering Education Research Methods (Quan, Qual, and Mixed) (3) Will be introduced to a variety of methods and tools available for conducting strong engineering education research studies. Covers multiple qualitative, quantitative, and mixed methods approaches. Students will gain knowledge of the theoretical underpinnings of the methods as well as the practical knowledge needed to use the methods in engineering education research.
Recommended Background: Graduate student in engineering, physical sciences, mathematics, or education.

EF 505 Preparing the Future Professoriate in Engineering (3) Prepares students for obtaining a faculty position and achieving tenure in engineering disciplines, discuss faculty roles and responsibilities, changing demographics and nature of the students/learners, and diversity and inclusiveness. Students will develop a professional portfolio, prepare for the application/interview process and write a mini-proposal.
Recommended Background: Graduate student in engineering, physical sciences, mathematics, or education.

EF 506 Advanced Research in Engineering Education (3) Will guide students through the process of conducting their research project. Guidance will include implementation of planned data collection and data analysis as well as preparing for dissemination in an academic publication. This course is a combination of seminar topics and independent study to guide students towards a review-ready manuscript in engineering education.
(RE) Prerequisite(s): EF 501 and EF 504.

EF 507 Curriculum Development in Engineering Education (3) Will guide students through the process of developing an engineering course that integrates research-based instructional strategies and modern assessment practices. Guidance will include the development of learning objectives, course activities, and assessment. This course is a combination of seminar topics and independent study to guide students towards a completed course design in their field of interest.
(RE) Prerequisite(s): EF 501 and EF 503.

Rationale: The proposed Engineering Education Certificate provides training in education theory, research methods, and instructional design within the context of engineering education. The Engineering Education Certificate serves graduate students who are preparing to teach, currently teaching, or interested in applying teaching and learning principles in a non-academic career. These topics are especially relevant for students interested in pursuing academic engineering positions in higher education or industry positions where they will have responsibilities in the development of training materials for different audiences. Impact on other units: none. Financial impact: Tickle College of Engineering plans to increase faculty size in the area of Engineering Education.

DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

(IE) Industrial Engineering

ADD

IE 503 Introduction to Industrial Engineering Research (2) Introduction to basic research skills in Industrial Engineering, including literature review, research question identification and definition, scientific writing, paper revision, presentation, proposal development, network building, research ethics, and an overiew of Industrial Engineering research methods.
(RE) Corequisite(s): 550.

Rationale: This course is to prepare MS students with the thesis option and PhD students for conducting quality research in Industrial Engineering. Impact on other units: None. Financial Impact: None.

DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

(MSE) Materials Science and Engineering

REVISE TITLE AND DESCRIPTION

MSE 511 Crystallography, Crystal Chemistry and Diffraction (3) Structure of materials: chemical bonding in materials, crystal structure, defects in crystals, diffraction. This course is one of the four *core* courses in the graduate MSE curriculum.

Formerly: Fundamentals of Materials Science and Engineering I (3) Structure of materials: chemical bonding in materials, crystal structure, defects in crystals, diffraction.

Rationale: A more specific title describing the topic(s) of the course may help to attract additional students from other disciplines. Noting the "core" course designation will remind MSE Ph.D. students of their obligation to take this course. Impact on other units: none. Financial impact: none.

MSE 512 Mechanics of Materials (3) Mechanics of materials: Stress and strain at a point, elastic constitutive equations, phenomenological bulk behavior, deformation mechanisms. This course is one of the four *core* courses in the graduate MSE curriculum.

Formerly: Fundamentals of Materials Science and Engineering II (3) Mechanics of materials: Stress and strain at a point, elastic constitutive equations, phenomenological bulk behavior, deformation mechanisms.

Rationale: A more specific title describing the topic(s) of the course may help to attract additional students from other disciplines. Noting the "core" course designation will remind MSE Ph.D. students of their obligation to take this course. Impact on other units: none. Financial impact: none.

MSE 513 Thermodynamics of Materials (3) Thermodynamics of materials: thermodynamics, diffusion, phase diagrams, kinetics. This course is one of the four *core* courses in the graduate MSE curriculum.

Formerly: Fundamentals of Materials Science and Engineering III (3) Thermodynamics of materials: thermodynamics, diffusion, phase diagrams, kinetics.

Rationale: A more specific title describing the topic(s) of the course may help to attract additional students from other disciplines. Noting the "core" course designation will remind MSE Ph.D. students of their obligation to take this course. Impact on other units: none. Financial impact: none.

MSE 514 Electronic, Optical, and Magnetic Properties of Materials (3) Electronics, optics, and magnetism: electrical and thermal conduction, quantum physics, band theory, dielectrics, magnetic and optical properties. This course is one of the four *core* courses in the graduate MSE curriculum.

Formerly: Fundamentals of Materials Science and Engineering IV (3) Electronics, optics, and magnetism: electrical and thermal conduction, quantum physics, band theory, dielectrics, magnetic and optical properties.

Rationale: A more specific title describing the topic(s) of the course may help to attract additional students from other disciplines. Noting the "core" course designation will remind MSE Ph.D. students of their obligation to take this course. Impact on other units: none. Financial impact: none.

DEPARTMENT OF MECHANICAL, AEROSPACE, AND BIOMEDICAL ENGINEERING

(ME) Mechanical Engineering

ADD AS A SECONDARY CROSS-LISTED COURSE

ME 563 Fiber Reinforced Composite Materials and Mechanics (3) Underlying concepts of fiber reinforced composite materials manufacturing and structural performance. Topics include: Basic Concepts, Materials, and Processes; Elastic Behavior - Micromechanics; Strength of Unidirectional Lamina - Micromechanics; Strength of Unidirectional Lamina-Macromechanics; Elastic Behavior of Multidirectional Laminates; Overview on Hygrothermal Effects and Residual Stress
Cross-listed: (See Civil Engineering 563).
Recommended Background: Statics, Strength of Materials.
Registration Restriction(s): Engineering graduate or senior undergraduate standing.

Rationale: With recent emphasis on fiber reinforced composites ecosystem in East Tennessee through the Composites Institute (IACMI), large use of such materials in additive manufacturing, there is a need for providing related training in this topic to the students in the Tickle College of Engineering. This course has been offered twice as a directed study class (CE 595) to date and received interest from graduate students in the Tickle College of Engineering from Civil, Mechanical, Manufacturing background. Impact on Other Units: No other existing class that covers these topics. Students from MABE take this class and is a positive impact. Financial impact: The course does not require additional resources or workload for faculty.

ADD

ME 566 Manufacturing Processes (3) Fundamental principles of the major classes of manufacturing processes, developing first order mathematical descriptions for selected processes. Comparison of advantages and limitations across various processes in terms of process quality and productivity. Application toward process selection, impact on product design, and quality control.
Recommended Background: mechanics of materials, heat transfer, materials science.

Rationale: This new course will serve as the first taken by students in the certificate program. It will provide a common baseline for all students progressing in the certificate. A similar course, ME366, is taught to undergraduates; this graduate-level course will more deeply cover the topics introduced in ME366. This also drives the selection of the course number. Impact on other units: This would be a mid-impact change because it is a new, required course, but will not be required by any programs outside the host college. Financial Impact: none.

DEPARTMENT OF NUCLEAR ENGINEERING

(NE) Nuclear Engineering

ADD

NE 501 Graduate Seminar (1) Encompasses the weekly technical seminars organized by the Department of Nuclear Engineering. Professionals and technical experts are invited to present colloquia in a variety of subjects spanning the field of nuclear engineering and related applications.
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 6 hours.
Credit Restriction: For MS students, a maximum of 3 hours may be applied to the major. For PhD students with MS, a maximum of 3 hours may be applied to the major. For PhD students directly from BS, a maximum of 6 hours may be applied to the major.
Registration Restriction(s): Minimum student level – graduate. For students in Tickle College of Engineering.

Rationale: This formalizes registration in the current departmental graduate seminar. Impact on other units: none. Financial impact: none.

REVISE CREDIT RESTRICTION

NE 520 Introduction to Nuclear Fuels and Materials (3)
Credit Restriction: Students that have received credit for MSE 450, NE 440, or MSE 520 cannot receive credit for NE 520.

Formerly: Credit Restriction: Students cannot receive credit for both NE 440 and 520.

Rationale: The wording change is proposed to clarify that there are undergraduate and graduate sections of this course listed under both NE and MSE. In past years, NE graduate students were allowed to sign up for Introduction to Nuclear Fuels and Materials as NE 440. However, NE440 has now been removed from the graduate catalog. The proposed change under "Credit Restrictions" above will ensure that students do not receive repeated credit by taking this course twice. Impact on other units: None. Financial Impact: None.

II. PROGRAM CHANGES

DEPARTMENT OF CHEMICAL AND BIOMOLECULAR ENGINEERING

REVISE DEGREE REQUIREMENT, CHEMICAL ENGINEERING MAJOR, MS – THESIS OPTION

In the 2018-2019 Graduate Catalog, revise the first bullet point in Thesis Option Requirements:

- A total of at least 21 credit hours in graduate-level courses (excluding CBE 500) in chemical and biomolecular engineering and related areas beyond the baccalaureate. These courses must include the five core courses (CBE 506, CBE 531, CBE 547, CBE 551, and CBE 579).

Formerly:
A total of at least 21 credit hours in graduate-level courses (excluding CBE 500) in chemical and biomolecular engineering and related areas beyond the baccalaureate. These courses must include the four core courses (CBE 506, CBE 531, CBE 547, and CBE 579).

Rationale: Faculty determination that core courses needed to be revised. Impact on other units: none. Financial impact: none.

REVISE DEGREE REQUIREMENT, CHEMICAL ENGINEERING MAJOR, MS – NON-THESIS OPTION

In the 2018-2019 Graduate Catalog, revise the first bullet point in Non-Thesis Option Requirements:

- Completion of a total of 30 credit hours of graduate course work. At least 18 of those credit hours must be in the department and must include the five core courses (CBE 506, CBE 531, CBE 547, CBE 551, and CBE 579).

Formerly:
Completion of a total of 30 credit hours of graduate course work. At least 18 of those credit hours must be in the department and must include the four core courses (CBE 506, CBE 531, CBE 547, and CBE 579).

Rationale: Faculty determination that core courses needed to be revised. Impact on other units: none. Financial impact: none.

REVISE DEGREE REQUIREMENTS, CHEMICAL ENGINEERING MAJOR, PHD

In the 2018-2019 Graduate Catalog, under the Requirements heading, revise the first and second bullet points as follows:

- A minimum of 36 credit hours in graduate-level courses (excluding CBE 600) in chemical engineering and related fields beyond the baccalaureate. These courses must include the five core courses (CBE 506, CBE 531, CBE 547, CBE 551, and CBE 579), and at least 6 credit hours of courses at the 600 level from the University of Tennessee, Knoxville.

Formerly:
A minimum of 36 credit hours in graduate-level courses (excluding CBE 600) in chemical engineering and related fields beyond the baccalaureate. These courses must include the four core courses (CBE 506, CBE 531, CBE 547, and CBE 579), and at least 6 credit hours of courses at the 600 level from the University of Tennessee, Knoxville.

Rationale: Programmatic assessment and discussions with external advisors have concluded that material in CBE 551 is a necessary curriculum element for graduate students in chemical and biomolecular engineering. Financial impact: None. Impact on other programs: None.

Note: This represents a medium-impact change since it mostly affects only CBE students. Students outside CBE have routinely inquired about this course, but insufficient demand has existed resulting in the course not being taught. As a required course, it will be taught annually.

- A qualifying exam that assesses the student's competence in the core areas of chemical and biomolecular engineering, ability to think analytically and creatively, and potential to perform original research. This requirement includes successful completion of the associated course CBE 601.

Formerly:
A qualifying exam that assesses the student's competence in the core areas of chemical and biomolecular engineering, ability to think analytically and creatively, and potential to perform original research.

Rationale: The listed course is required as part of the qualifying exam. Financial impact: None. Impact on other programs: None.

Note: This represents a low-impact change since it affects only CBE PhD students and only alters the mechanism of the existing qualifying exam requirement.

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

REVISE REQUIREMENTS: CONTRACTUAL AND LEGAL AFFAIRS IN ENGINEERING AND CONSTRUCTION GRADUATE CERTIFICATE

In the 2018-2019 Graduate Catalog, under the Primary courses heading revise as shown below:

- CE 584, Construction Conflicts, Claims, and Disputes (3) [waived for law students]
- Law 944, Construction Law (3)
- Capstone: Student in coordination with faculty supervisor for the program will choose one of the following based on availability and interests of student: Law 904 Construction Law Cases and Studies (3); Law 992 Field Placement (3); or Law 994 Independent Study (3).

Formerly:
CE 584, Construction Conflicts, Claims, and Disputes (3) [waived for law students]
Law 994, Independent Study (Capstone) (3)
Law 944, Construction Law (3)

Rationale: Reflects a change to the program allowing students to complete Law 904, Law 992, or Law 994 as means of satisfying the capstone requirement for conferral of the certificate. Law 904 is a simulation class. Law 992 would be an actual experiential class that should provide an equivalent educational experience. Law 994 Independent Study is included as an option for students who are unable to take Law 904 or Law 992 and can be designed to provide an equivalent educational experience. Impact on other units: The College of Engineering agrees with the change. Financial impact: None expected. Additional Documentation: none needed.

DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

REVISE REQUIREMENTS - COMPUTER SCIENCE MAJOR, PHD

In the 2018-19 Graduate Catalog, under the Requirements heading, first paragraph, revise the first two sentences as follows:

Students holding only a BS degree**,** as well as those students who receive a concurrent MS degree in Electrical Engineering, Computer Engineering, or Computer Science while enrolled as a PhD student, must take a minimum of 72 total graduate credit hours, including a minimum of 39 graduate course credit hours. Students holding a non-concurrent MS degree in Electrical Engineering, Computer Engineering, or Computer Science from UT will be required to take a minimum of 48 total graduate credit hours, including at least 15 credit hours of graduate course credit beyond those applied to their MS degree.

Formerly: Students holding only a BS degree must take a minimum of 72 total graduate credit hours, including a minimum of 39 graduate course credit hours. Students holding an MS degree in Electrical Engineering, Computer Engineering, or Computer Science from UT will be required to take a minimum of 48 total graduate credit hours, including at least 15 credit hours of graduate course credit beyond those applied to their MS degree.

Rationale: As worded, students holding a MS degree from the EECS department are required to take at least 15 hours of graduate course credit beyond their MS. This requirement unintentionally impacts BS → PhD students who apply for concurrent MS degrees during their PhD. This revision changes the number of course credit hours that are required for concurrent MS degree holders. It does not change the requirements for students with non-concurrent MS degrees. Impact on other units: None. Financial impact: None.

REVISE REQUIREMENTS - COMPUTER ENGINEERNG MAJOR, PHD

In the 2018-19 Graduate Catalog, under the Requirements heading, first paragraph, revise the first two sentences as follows:

Students holding only a BS degree, as well as those students who receive a concurrent MS degree in Electrical Engineering, Computer Engineering, or Computer Science while enrolled as a PhD student, must take a minimum of 72 total graduate credit hours, including a minimum of 39 graduate course credit hours. Students holding a non-concurrent MS degree in Electrical Engineering, Computer Engineering, or Computer Science from UT will be required to take a minimum of 48 total graduate credit hours, including at least 15 credit hours of graduate course credit beyond those applied to their MS degree.

Formerly: Students holding only a BS degree must take a minimum of 72 total graduate credit hours, including a minimum of 39 graduate course credit hours. Students holding an MS degree in Electrical Engineering, Computer Engineering, or Computer Science from UT will be required to take a minimum of 48 total graduate credit hours, including at least 15 credit hours of graduate course work beyond those applied to their MS degree.

Rationale: As worded, students holding a MS degree from the EECS department are required to take at least 15 hours of graduate course credit beyond their MS. This requirement unintentionally impacts BS → PhD students who apply for concurrent MS degrees during their PhD. This revision changes the number of course credit hours that are required for concurrent MS degree holders. It does not change the requirements for students with non-concurrent MS degrees. Impact on other units: None. Financial impact: None.

REVISE REQUIREMENTS - ELECTRICAL ENGINEERNG MAJOR, PHD

In the 2018-19 Graduate Catalog, under the Requirements heading, first paragraph, revise the first two sentences as follows:

Students holding only a BS degree, as well as students who receive a concurrent MS degree in Electrical Engineering, Computer Engineering, or Computer Science while enrolled as a PhD student, must take a minimum of 72 total graduate credit hours, including a minimum of 39 graduate course credit hours. Students holding a non-concurrent MS degree in Electrical Engineering, Computer Engineering, or Computer Science from UT will be required to take a minimum of 48 total graduate credit hours, including at least 15 credit hours of graduate course credit beyond those applied to their MS degree.

Formerly: Students holding only a BS degree must take a minimum of 72 total graduate credit hours, including a minimum of 39 graduate course credit hours. Students holding an MS degree in Electrical Engineering, Computer Engineering, or Computer Science from the University of Tennessee will be required to take a minimum of 48 total graduate credit hours, including at least 15 credit hours of graduate course credit beyond those applied to their MS degree.

Rationale: As worded, students holding a MS degree from the EECS department are required to take at least 15 hours of graduate course credit beyond their MS. This requirement unintentionally impacts BS → PhD students who apply for concurrent MS degrees during their PhD. This revision changes the number of course credit hours that are required for concurrent MS degree holders. It does not change the requirements for students with non-concurrent MS degrees. Impact on other units: None. Financial impact: None.

ENGINEERING FUNDAMENTALS

+ ADD GRADUATE CERTIFICATE

ENGINEERING EDUCATION

In the 2018-2019 Graduate Catalog, add heading, text and requirements for new certificate: Engineering Education.

Engineering Education Graduate Certificate
The Engineering Fundamentals Program offers a stand-alone or add-on graduate certificate in engineering education. This certificate is for current graduate students or individuals with a bachelor's degree in engineering, the physical sciences, mathematics, or education. Applicants must meet the admission criteria required by the Graduate School. Through participation in the (12 credit hour) certificate, our graduate students will:

- Be exposed to a diverse set of educational theories applicable to learning in engineering contexts
- Write a research proposal for an education-based research project
- Evaluate the quality of existing engineering education research publications
- Develop effective, evidence-based teaching, learning, and mentoring practices
- Create learning-centered syllabi, activities, and assignments
- Identify research-based strategies to teach diverse populations

Requirements:
Achievement of the certificate is obtained through completion of the following required and elective courses representing a total of 12 credit hours.

Required (9 credit hours)
EF 501 Education Theory for Research and Practice (3)
EF 503 Engineering Instruction and Practice (3)
EF 504 Research Methods (Quan, Qual, and Mixed) (3)

Electives (3 credit hours - choose one of the following three courses):
EF 505 Preparing the Future Professoriate (3)
EF 506 Advanced Research in Engineering Education (3)
EF 507 Curriculum Development in Engineering Education (3)

Contact Dr. Courtney Faber, EE Certificate Coordinator, cfaber2@utk.edu for questions.

Rationale: This certificate provides training in education theory, research methods, and instructional design within the context of engineering education. The Engineering Education Certificate serves graduate students who are preparing to teach, currently teaching, or interested in applying teaching and learning principles in a non-academic career. These topics are especially relevant for students interested in pursuing academic engineering positions in higher education or industry positions where they will have responsibilities in the development of training materials for different audiences. Impact on other units: none. Financial impact: none.

DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

ϕ DROP CONCENTRATIONS – MATERIALS SCIENCE AND ENGINEERING MAJOR, MS

Biomaterials concentration
Materials concentration
Metallurgy concentration
Polymers concentration

ϕ DROP CONCENTRATIONS – MATERIALS SCIENCE AND ENGINEERING MAJOR, PHD

Biomaterials concentration
Materials concentration
Metallurgy concentration
Polymers concentration

Rationale: The MSE faculty voted to drop the above concentrations and offer concentrations in only the following areas: 1. Nanomaterials concentration, 2. Automotive materials concentration (for the MS and PhD), 3. Energy Science and Engineering concentration (PhD only). These are strategic areas for the Materials Science and Engineering department. Impact on other units: none. Financial impact: none.

REVISE DEPARTMENT INTRODUCTORY INFORMATION TEXT

In the 2018-2019 Graduate Catalog, revise the department introductory text by removing the second paragraph. The first paragraph, shown below, stays and remains the same.

Graduate programs are offered leading to the degrees of Master of Science and Doctor of Philosophy with a major in materials science and engineering. The materials science and engineering program is flexible and interdisciplinary in nature. Students may be admitted from a wide range of disciplines. These include physics, chemistry, chemical engineering, mechanical engineering, electrical engineering, materials engineering, and engineering science programs.

Formerly: The materials science and engineering concentrations offer specializations to include, but not limited to, ceramics, composites, electronic materials, physical metallurgy, materials processing, welding metallurgy and materials joining, corrosion science and engineering, biomedical materials, nonwovens science and technology, mechanical and physical behaviors of materials, and nanoscience and technology.

Rationale: The MSE faculty voted to eliminate specializations to simplify the department offerings with regard to concentrations of study. The department does not currently have expertise in a number of the specializations listed in the catalog. Impact on other units: none. Financial impact: none.

REVISE REQUIREMENTS: MATERIALS SCIENCE AND ENGINEERING MAJOR, MS – THESIS OPTION

In the 2019-2020 Graduate Catalog, under the Thesis Option, revise the bullets as shown below and remove/delete the last paragraph about resident student requirements. There are now 5 bullets (previously 4).

Thesis Option

- A major consisting of a minimum 9 credit hours of graduate courses in materials science and engineering consisting of MSE 511, MSE 512, MSE 513, or MSE 514.
- Additional courses up to 15 graduate credit hours total in related areas.
- Master's thesis MSE 500, minimum 6 credit hours.
- Satisfactory performance on a comprehensive oral examination administered by the faculty committee.
- Three credit hours of MSE 503 may be counted toward degree requirements.

Formerly:

- A major consisting of 12 credit hours of graduate courses in materials science and engineering consisting of MSE 511, MSE 512, MSE 513, and MSE 514.
- Additional courses up to 12 credit hours total in related areas. These courses must include MSE 515 and MSE 516 for the metallurgy concentration; MSE 540 and MSE 552 for the polymers concentration; two graduate specialization courses approved by the student's faculty committee for the materials concentration; two courses from the approved nanomaterials specialization list for the nanomaterials concentration; two courses from the approved automotive materials specialization list for the automotive concentration; and two courses from the approved specialization list for the biomaterials concentration.
- Master's thesis MSE 500, totaling 6 to 12 credit hours.
- Satisfactory performance on a comprehensive oral examination administered by the faculty committee.

All resident students are required to participate in the graduate seminar in materials science and engineering, as appropriate, during each semester in which it is offered. Three credit hours of MSE 503 may be counted toward degree requirements.

Rationale: (1) MSE will no longer have specializations. (2) MSE is dropping some of the concentrations listed in the current verbiage. (3) The reduction from 12 credit hours to 9 credit hours for MSE 511-14 will allow MS students more flexibility to choose courses that complement research interests. There is also anecdotal evidence that MSE may attract more MS students with this change. (4) Removing resident student requirement for MSE 503 makes this catalog verbiage consistent with MSE handbook verbiage. Impact on other units: none. Financial impact: none.

REVISE REQUIREMENTS – MATERIALS SCIENCE AND ENGINEERING MAJOR, MS, NON-THESIS OPTION

In the 2019-2020 Graduate Catalog, under the Non-Thesis Option, revise the two bullets as shown below.

Non-Thesis Option

- Completion of a total of 30 credit hours of graduate course work. At least 18 of those credit hours must be in the department and include 3 of the following 4 courses: MSE 511, MSE 512, MSE 513, and MSE 514. Up to 12 credit hours may be in related areas. Up to three credit hours of MSE 503 may be counted toward degree requirements. The non-thesis option for all concentrations must include the same courses required for the thesis option. The faculty committee must approve the candidate's degree program.
- Satisfactory completion of MSE 580 as a culminating experience. Non-thesis students are not required to take a comprehensive exam as part of the degree requirements. Satisfactory completion of MSE 580 requires passage of a technical oral presentation (with an option for an additional written requirement), as proctored by the student's advisor and committee.

Formerly:

- Completion of a total of 30 credit hours of graduate course work. At least 18 of those credit hours must be in the department and include MSE 511, MSE 512, MSE 513, and MSE 514. Up to 12 credit hours may be in related areas. Three credit hours of MSE 503 may be counted toward degree requirements. The non-thesis option for all concentrations must include the same courses required for the thesis option. The faculty committee must approve the candidate's degree program.
- Satisfactory completion of MSE 580 as a culminating experience. This course shall include a comprehensive examination administered by the faculty committee.

Rationale: (1) The reduction from 12 credit hours to 9 credit hours for MSE 511-14 will allow MS students more flexibility to choose courses that complement research interests. There is also anecdotal evidence that MSE may attract more MS students with this change. (2) Removing the comprehensive examination requirement for MSE 580 reflects votes by the MSE graduate affairs committee and the MSE faculty on this topic. Impact on other units: none. Financial impact: none.

REVISE REQUIREMENTS – MATERIALS SCIENCE AND ENGINEERING MAJOR, PHD

In the 2019-2020 Graduate Catalog, under the Requirements heading (currently 5 bullet points), revise as shown below. There will now be four bullet points.

Requirements

Departmental requirements for completion of the doctoral degree are as follows.

- Satisfactory performance on the applicable comprehensive examination.
- For students proceeding directly to the PhD from the baccalaureate degree, a minimum of 72 graduate credit hours is required. The credit hours must include: 36 credit hours of graduate course work with the following stipulations: 1) at least 6 credit hours of 600-level courses in the department; 2) completion of MSE 511, MSE 512, MSE 513, and MSE 514; 3) up to 6 credit hours of MSE 503 may be counted toward the graduate course work 4) a minimum of 24 of the graduate course credit hours must be in the department. Additionally, a minimum of 24 credit hours of dissertation is required. For students in the nanomaterials concentration at least 12 credit hours of course work must be from the approved nanomaterials specialization list. For students in the automotive materials concentration at least 12 credit hours of course work must be from the approved automotive materials specialization list. For students in the Energy Science and Engineering concentration, all 18 credit hours of course work must be from the curriculum jointly approved by the Bredesen Center for Interdisciplinary Research and Graduate Education and the MSE graduate affairs committee.
- For students having a thesis-based master's degree in materials science and engineering or a related field as approved by the PhD committee, a minimum of 48 graduate credit hours is required. The 48 credit hours must include: 12 credit hours of graduate course work where the combined thesis and PhD graduate course work must satisfy the following requirements: 1) at least 6 credit hours of 600-level courses in the department; 2) completion of MSE 511, MSE 512, MSE 513, and MSE 514; 3) up to 6 credit hours of MSE 503 may be counted toward the graduate course work; 4) a minimum of 24 of the graduate course credit hours must be in the department. Additionally, a minimum of 24 credit hours of dissertation is required. The MSE 500 credit hours earned in the thesis masters do not count towards the 72 credit hour PhD requirement. For students in the nanomaterials concentration at least 12 credit hours of course work must be from the approved nanomaterials specialization list. For students in the automotive materials concentration at least 12 credit hours of course work must be from the approved automotive materials specialization list. For students in the Energy Science and Engineering concentration, all 18 credit hours of course work must be from the curriculum jointly approved by the Bredesen Center for Interdisciplinary Research and Graduate Education and the MSE graduate affairs committee.

- For students having a non-thesis master's degree in materials science and engineering or polymer engineering, or a related field as approved by the PhD committee, a minimum of 42 graduate credit hours is required for a total (MS + PhD) of at least 72 graduate credit hours. The 42 credit hours must include: 6 credit hours of graduate course work where the combined non-thesis and PhD graduate course work must satisfy the following requirements: 1) at least 6 credit hours of 600-level courses in the department; 2) completion of MSE 511, MSE 512, MSE 513, and MSE 514; 3) up to 6 credit hours of MSE 503 may be counted toward the graduate course work; 4) a minimum of 24 of the graduate course credit hours must be in the department. Additionally, a minimum of 24 credit hours of dissertation is required. For students in the nanomaterials concentration at least 12 credit hours of course work must be from the approved nanomaterials specialization list. For students in the automotive materials concentration at least 12 credit hours of course work must be from the approved automotive materials specialization list. For students in the Energy Science and Engineering concentration, all 18 credit hours of course work must be from the curriculum jointly approved by the Bredesen Center for Interdisciplinary Research and Graduate Education and the MSE graduate affairs committee.

Formerly:
Requirements
Departmental requirements for completion of the doctoral degree are as follows.

- Satisfactory performance on the applicable comprehensive examination.
- Active participation in graduate seminars conducted by the department.
- For students proceeding directly to the PhD from the baccalaureate degree, a minimum of 72 graduate credit hours is required. These credit hours must include 42 graduate credit hours, including MSE 511, MSE 512, MSE 513, and MSE 514, at least 6 credit hours of 600-level courses in the department, and 30 credit hours of dissertation. Six credit hours of MSE 503 may be counted toward degree requirements. At least 24 credit hours must be courses taught in the department. The materials science and engineering major must include the courses required for the master's program. Coursework in the polymers concentration must include the courses required for the master's program and MSE 639. For students in the nanomaterials concentration at least 12 credit hours of course work must be from the approved nanomaterials specialization list. For students in the biomaterials concentration at least 12 credit hours of course work must be from the approved biomaterials specialization list. For students in the automotive materials concentration at least 12 credit hours of course work must be from the approved automotive materials specialization list. For students in the Energy Science and Engineering concentration, at least 18 credit hours of course work must be from the curriculum jointly approved by the Bredesen Center for Interdisciplinary Research and Graduate Education and the MSE graduate affairs committee.
- For students having a thesis-based master's degree from UT in materials science and engineering or polymer engineering or a master's degree from another university in materials science and engineering, polymer engineering, or metallurgical engineering, a minimum of 48 graduate credit hours is required. These credit hours must include 18 credit hours of graduate course work with at least 6 credit hours of 600-level courses in the department and 30 credit hours of dissertation. Three credit hours of MSE 503 may be counted toward degree requirements. Coursework in the polymers concentration must include the courses required for the master's program and MSE 639. For students in the nanomaterials concentration at least 12 credit hours of course work must be from the approved nanomaterials specialization list. For students in the automotive materials concentration at least 12 credit hours of course work must be from the approved automotive materials specialization list. At least 12 credit hours must be courses in the department. For students in the Energy Science and Engineering concentration, all 18 credit hours of course work must be from the curriculum jointly approved by the Bredesen Center for Interdisciplinary Research and Graduate Education and the MSE graduate affairs committee.
- For students having a non-thesis master's degree from UT in materials science and engineering or polymer engineering, a minimum of 48 graduate credit hours is required. These must include 15 credit hours of graduate course work with at least 6 credit hours of 600-level courses in the department and 33 credit hours of dissertation. Coursework in the polymers concentration must include the courses required for the master's program and MSE 639. For students in the nanomaterials concentration at least 12 credit hours of course work must be from the approved nanomaterials specialization list. For students in the automotive materials concentration at least 12 credit hours of course work must be from the approved automotive materials specialization list. Three credit hours of MSE 503 may be counted toward degree requirements. At least 12 credit hours must be courses in the department. For students in the Energy Science and Engineering concentration, 18 credit hours of course work must be taken from the curriculum jointly approved by the Bredesen Center for Interdisciplinary Research and Graduate Education and the MSE graduate affairs committee.

Rationale: (1) Streamline catalog degree descriptions and make them more clear. (2) Reduce minimum graduate course credit hour requirement from 42 to 36. (3) Graduate seminar is no longer mandatory. Impact on other units: none. Financial impact: none.

DEPARTMENT OF MECHANICAL, AEROSPACE, AND BIOMEDICAL ENGINEERING

+ ADD GRADUATE CERTIFICATE

ADVANCED MANUFACTURING

In the 2019-2020 Graduate Catalog, add heading, text and requirements for new certificate.

Advanced Manufacturing Graduate Certificate
The Advanced Manufacturing Graduate Certificate is offered by the Mechanical Engineering program. The applicants are expected to have a baccalaureate degree in an engineering discipline with a GPA of 3.0. Students from other disciplines may be admitted, but they may potentially be required to take prerequisite courses as described in the Graduate Catalog. Recommended background knowledge includes mathematics (up through calculus and differential equations), mechanics of materials, heat transfer, and materials science. Applicants may be admitted to the certificate or complete the certificate as part of an MS or PhD.

The certificate will enable students to accomplish the following:

1. Students will apply knowledge of conventional manufacturing techniques, their particular benefits, and their shortcomings to guide the adoption of advanced manufacturing technologies.
2. Students will apply knowledge of how the mechanics of materials affect product properties and manufacturability, including in advanced manufacturing technologies.
3. Certificate holders will have accomplished coursework in electives focused on particular segments of the broader field of advanced manufacturing.

The certificate requires 12 credit hours of graduate course work as follows:

Required courses:
ME 559 (3)
ME 566 (3)

Electives (choose two):
ME 560 (3)
ME 569 (3)
ME 586 (3)
ME 599 (3)

Note: ME 599 (Special Topic: Graduate elective in Principles of Composites Manufacturing)

Rationale: There is a growing need for this graduate certificate due to expansion of Tennessee manufacturing capabilities. Industry partners routinely request we offer such a certificate to enhance their companies' labor force capabilities. Impact on other units: none. Financial impact: none.

DEPARTMENT OF NUCLEAR ENGINEERING

REVISE REQUIREMENTS - NUCLEAR ENGINEERING MAJOR, MS

In the 2018-2019 Graduate Catalog, under the Requirements heading, revise as follows:

Requirements
The minimum requirements for the MS in nuclear engineering are

- A major consisting of 15 credit hours of graduate courses in nuclear engineering which must include at least two of the following courses – NE 511, NE 521 or NE 522, NE 540, NE 542, NE 551, NE 563, NE 571.
- An additional 9 credit hours of graduate courses related to the student's research, as approved by the student's committee.
- Only 9 credit hours of 400 level graduate coursework can be applied towards the 24 credit hour course requirement.
- Two credits (1+1) of NE 501 are required, and a maximum of 3 credit hours of NE 501 can be used towards the 15 credit hours of NE graduate courses.
- Completion of one of the options listed below.

  Option 1 – a thesis project (6 credit hours of NE 500).
  Option 2 – two engineering practice projects (6 credit hours of NE 598).
  Option 3 – one engineering practice project (3 credit hours of NE 598) plus 3 credit hours of additional nuclear engineering course work.

Formerly:
Requirements
The minimum requirements for the MS in nuclear engineering are:

- A major consisting of 12 credit hours of graduate courses in nuclear engineering which must include at least two of the following courses – NE 511, NE 521 or NE 522, NE 540, NE 542, NE 551, NE 563, NE 571.
- An additional 12 credit hours of graduate courses related to the student's research, as approved by the student's committee.
  Option 1 – a thesis project (6 credit hours of NE 500).
  Option 2 – two engineering practice projects (6 credit hours of NE 598).
  Option 3 – one engineering practice project (3 credit hours of NE 598) plus 3 credit hours of additional nuclear engineering course work.

Rationale: These sections are being modified to add clarity to the requirements for a PhD and MS degree, including more flexibility for graduate committees, as well as a better alignment with other departments in the college as well as with the top NE programs at peer institutions. This change also includes the newly added course NE 501 Graduate Seminar. Impact on other units: none. Financial Impact: none.

REVISE REQUIREMENTS - NUCLEAR ENGINEERING MAJOR, PHD

In the 2018-2019 Graduate Catalog, revise leading paragraph and requirements to read as follows:

Students in the field of nuclear engineering desiring to study for the Doctor of Philosophy degree must have a Bachelor of Science or Master of Science from a recognized university with a major in engineering, physics, chemistry, or mathematics. It is required that all applicants to the degree programs submit scores from the General Graduate Record Examination (GRE).

Requirements
Specific requirements for the PhD with a major in nuclear engineering include the following.

- A minimum of 72 graduate credit hours beyond the bachelor's degree, exclusive of credit for the MS thesis. Of this number, a minimum of 24 credit hours in NE 600 and a minimum of 39 credit hours of graduate course work will be required.
- The graduate course work requirement includes a minimum of 27 credit hours of graduate courses in nuclear engineering at or above the 500-level, exclusive of thesis, practice project, or dissertation credit.
- Three credits (1+1+1) of NE 501 Graduate Seminar are required as part of the 27 credit hours of graduate course work in nuclear engineering.
- A minimum of 12 additional course work credit hours is required, subject to approval by the student's faculty committee.
- At least 6 credit hours of the above coursework must be at the 600-level, with at least 3 of these credit hours in nuclear engineering.
- At the discretion of the student's dissertation committee and depending on the student's background, more than 39 credit hours of courses may be required.
- A maximum of 24 credit hours from a master's degree may be used to satisfy the course requirements for the PhD.

The first part of the comprehensive examination is prepared by the nuclear engineering faculty and consists of 6 credit hours of written examination that is administered over a two-day period. A student who fails the written examination must take and pass the examination the next time it is offered to remain in the PhD program. Registration for NE 600 is not permitted until the written examination is passed. The second part of the comprehensive examination is completed with the successful oral defense of a written dissertation proposal.

After completion of the dissertation, prior to graduation, each student must pass a dissertation defense examination administered by a faculty committee.

Formerly:
Students in the field of nuclear engineering desiring to study for the Doctor of Philosophy degree must have a Bachelor of Science or Master of Science from a recognized university with a major in engineering, physics, chemistry, or mathematics. All candidates will be required to demonstrate general competence in a comprehensive examination in the areas of engineering science, mathematics, chemistry, physics, and nuclear engineering.
Requirements
Specific requirements for the PhD with a major in nuclear engineering include the following.

- A minimum of 48 credit hours of graduate course work and 24 credit hours doctoral research (NE 600) beyond the bachelor's degree. If the student has a master's degree when entering the PhD program, then a minimum of 24 credit hours of graduate course work beyond all masters is required and 24 credit hours of doctoral research (NE 600).
- A minimum of 30 credit hours in nuclear engineering courses numbered 500 and above (or the equivalent). These are exclusive of thesis, practice project, or dissertation credit.
- A minimum of 18 graduate credit hours of course work in addition to the requirement of 30 credit hours of graduate nuclear engineering course credit hours. The 18 graduate hours are to be related to the student's research, as approved by the student's committee. No more than twelve 400-level graduate credit hours may be used to satisfy this requirement.
- A minimum of 6 credit hours of 600-level courses. No more than 3 credit hours of the 600-level course hour requirement may come from a department other than nuclear engineering.

The first part of the comprehensive examination is prepared by the nuclear engineering faculty and consists of 6 credit hours of written examination that is administered over a two-day period. All past written examinations are filed in the library and students are encouraged to review them. Students are invited to take the written examination after completing approximately 30 credit hours of graduate course work. A student who fails the written examination must take and pass the examination the next time it is offered to remain in the PhD program. Registration for NE 600 is not permitted until the written examination is passed. The second part of the comprehensive examination is completed with the successful oral defense of a written dissertation proposal.

A candidate must successfully defend, in an oral examination, all work presented for the degree (all course work and the dissertation).

Rationale: These sections are being modified to add clarity to the requirements for a PhD and MS degree, including more flexibility for graduate committees, as well as a better alignment with other departments in the college as well as with the top NE programs at peer institutions. This change also includes the newly added course NE 501 Graduate Seminar. Impact on other units: none. Financial Impact: none.

+ ADD MAJOR AND DEGREE

MEDICAL PHYSICS MAJOR, MS* (*PENDING THEC APPROVAL*)

*This program is pending approval from the Tennessee Higher Education Commission (THEC). Students will be admitted to the major and degree only after THEC approves the program.

In the 2019-2020 Graduate Catalog, insert heading, text and requirements for the Medical Physics major, MS, as follows:

Medical Physics Major, MS (*Pending THEC Approval*)
The MS in Medical Physics program is designed for graduates of accredited undergraduate programs in engineering or physics. All entering students shall have a strong foundation in basic physics demonstrated either by an undergraduate or

graduate degree in physics, or by a degree in an engineering discipline or another of the physical sciences and with coursework that is the equivalent of a minor in physics (i.e., one that includes at least three upper-level undergraduate physics courses that would be required for a physics major). Students must take BCMB 230 (Human Physiology) and EEB 240 (Human Anatomy) or the equivalent, as prerequisites.

The UT Medical Physics programs will be applying for accreditation from CAMPEP. Please check the CAMPEP website to determine whether the program has been accredited yet: http://www.campep.org/campeplstgrad.asp.

Requirements
The minimum requirements for the MS degree in Medical Physics are 30 graduate credit hours as follows:

- A major consisting of 15 credit hours of graduate courses in engineering which must include each of the following courses – BME 574, NE 490, NE 551, NE 567, NE 568.
- An additional 3 graduate courses, two of which are from the following list of electives: NE 406, NE 542, NE 550, NE 552, NE 582, NE 583, NE 588.
- A choice of one of the following options:
  Option 1 – a thesis project (6 credit hours of NE 500).
  Option 2 – two engineering practice projects (6 credit hours of NE 598).
  Option 3 – one engineering practice project (3 credit hours of NE 598) plus 3 credit hours of additional course work as approved by the graduate committee.

The Medical Physics Program Director must be a member of all MS graduate committees.

The determination of which option a student may undertake is made by the student's graduate committee and is based on the student's personal interests, academic background, and work experience, as well as the nature of projects currently available in the department. A thesis project requires the student to conduct independent, in-depth research. An engineering practice project is similar to a thesis project but smaller in scope and can involve research, design, product development, or a critical review of published literature in a specific technical area. The final report for an engineering practice project is normally prepared in thesis format (i.e., according to the Graduate School, Guide to the Preparation of Theses and Dissertations); however, another formal report format may be used if approved by the student's graduate committee. The student must also register for the appropriate number of credit hours of either NE 500 or NE 598, as specified by the student's Major Professor, during each semester that work is performed on a thesis or engineering practice project. Finally, the student must pass an oral examination on all work presented for the degree (all course work and all projects).

Prerequisite Courses	**Credit Hours**
BCMB 230 Human Physiology	5
EEB 240 Human Anatomy	4

Core Classes	
BME 574Medical Imaging	3
NE 490Radiation Biology	3
NE 551Radiation Protection	3
NE 567Medical Physics I	3
NE 568Medical Physics II	3

Elective Courses (Select three graduate courses, two of which are from this list):	
NE 406 Radiation Shielding	3
NE 542 Management of Radioactive Materials	3
NE 550 Radiation Measurements Laboratory	4
NE 552 Radiological Assessment and Dosimetry	3
NE 582 Monte Carlo Analysis	3
NE 583 Radiation Transport Methods	3
NE 588 Particle Accelerators: Technology and Applications	3

Research Requirement (Complete 6 credit hours of thesis or engineering practice)	
NE 500 Thesis	6
NE 598 Nuclear Engineering Practice	6

Rationale: The Medical Physics MS degree will replace our Radiological Engineering concentration, and it positively impacts our teaching, research, scholarship, and engagement activities. The degree will also directly affect two of the VolVision 2020 strategic priorities. First, it will positively impact graduate enrollment by allowing us to retain several of our BS graduates who wish to pursue a career in Medical Physics. Currently, those students pursue their graduate education at schools such as Georgia Tech, the University of Florida, or Duke. Second, it positively affects the VolVision 2020 "Research, Scholarship, Creative Activity, and Engagement" priority. Having an accredited program and a partnership with ProVision Healthcare LLC (a local medical company specializing in proton therapy) will allow us to jointly identify and solve medical issues to improve the livelihood of Tennessee residents and those throughout the world. Impact on other units: none. Financial Impact: none.

Additional Documentation: This program is pending approval from the Tennessee Higher Education Commission, which is waiting for final disposition resulting from the UTK curricular approval process. Students will be admitted to the degree only after the university and THEC approve the program. The Letter of Intent and proposal submission (including NE faculty and CVs) have been submitted to THEC.

ϕ DROP CONCENTRATION – NUCLEAR ENGINEERING MAJOR, MS

Radiological Engineering

Rationale: The Medical Physics MS degree will replace our Radiological Engineering concentration.

+ ADD GRADUATE CERTIFICATE

MEDICAL PHYSICS GRADUATE CERTIFICATE

In the 2018-2019 Graduate Catalog, add heading, text, and requirements for the Medical Physics Graduate Certificate:

Medical Physics Graduate Certificate
The Department of Nuclear Engineering offers a graduate certificate in Medical Physics (MP). The Graduate Certificate in Medical Physics program is designed for graduates of accredited undergraduate programs in engineering or physics seeking a PhD in Nuclear Engineering who would like to become certified Medical Physicists and/or conduct research in Medical Physics.

All entering students shall have a strong foundation in basic physics demonstrated either by an undergraduate or graduate degree in physics, or by a degree in an engineering discipline or another of the physical sciences and with coursework that is the equivalent of a minor in physics (i.e., one that includes at least three upper-level undergraduate physics courses that would be required for a physics major. Students must take BCMB 230 (Human Physiology) and EEB 240 (Human Anatomy) or the equivalent, as prerequisites.

The UT Medical Physics programs will be applying for accreditation from CAMPEP. Please check the CAMPEP website to determine whether the program has been accredited yet: http://www.campep.org/campeplstgrad.asp.

Requirements
The 15-credit hour certificate is earned by completing the five required graduate courses listed below. The student must have completed the two prerequisites before they will be admitted to the certificate.

Required Courses	**Credit Hours**
BME 574 Medical Imaging	3
NE 490 Radiation Biology	3
NE 551 Radiation Protection	3
NE 567 Medical Physics I	3
NE 568 Medical Physics II	3

Prerequisite Courses	
BCMB 230Human Physiology	5
EEB 240Human Anatomy	4

The Medical Physics Program Director must be a member of all PhD graduate committees for students that intend to receive a Graduate Certificate in Medical Physics as an Add-on Option. If applying for the Stand-Alone option, the Medical Physics Program Director will help to make the acceptance decision.

Rationale: The Medical Physics Graduate Certificate has the same positive impacts as the MS degree in Medical Physics, but it is targeted to PhD students in Nuclear Engineering seeking to be certified as Medical Physicists or intending to pursue research in medical physics. This proposed Graduate Certificate was approved by TCE faculty in November 2017 and approved later by UTK Graduate Curriculum Committee conditionally subject to funding. The funding issue is resolved and the proposal is resubmitted for 2019-20 academic year catalog. Radiological Engineering concentration for MSNE program will be retained if Medical Physics MS degree and Medical Physics Graduate Certificate were not approved by THEC. The Radiological Engineering for PhD degree will be retained in all cases. Impact on other units: none. Financial Impact: none.

COLLEGE OF LAW

All changes effective Fall 2019

I. COURSE CHANGES

ADD

Law 863 Sex, Gender, and Justice (3) Analyzes contemporary legal issues concerning the relationship between sexuality, gender, and the law. Will focus on the relationship between social norms concerning sex and gender and the law, introducing students to the different theoretical and judicial approaches to the legal regulation of sex and gender in our society. Topics include: discrimination on the basis of sex, sexual orientation, and gender identity (in the workplace, schools, the family, and the military); reproductive rights; the intersectionality of race, gender, and sexuality; sexual violence against men and women; sexual assault on campus; and the role of gender and war.
Registration Restriction(s): Law students only.

Rationale: The course is similar to Women in the Law (Law 958), which was recently dropped from the Graduate Catalog, but is a more expansive examination of issues related to sexuality and gender. Updates curricular offerings to better reflect changes in the law. Impact on other units: None expected. Financial impact: None expected. Additional Documentation:

Law 950 Community Economic Development Clinic (6) The Community Economic Development Clinic will teach students transactional skills through the representation of nonprofit organizations, community-based associations, small businesses, and artists. The clinic consists primarily of supervised fieldwork where students assume primary responsibility for representing clients with various non-litigation matters, including interacting with local, state, and federal agencies; engaging in statutory interpretation; conducting regulatory research; drafting contracts and governance documents; negotiating and documenting transactions and dispute resolutions; interviewing and counseling clients; providing compliance advice; and gaining comfort with public speaking.
(DE) Prerequisite: 827.
(DE) Corequisite: 814 and 842.
Registration Restriction(s): Law students only.

Rationale: As a transactional clinic with a social justice focus, the Community Economic Development Clinic provides an additional experiential course to fill a gap in UT's impressive clinic roster. Not only does the clinic support a community that is underrepresented by the market (i.e., nonprofit organizations, sole proprietors, and "mom and pop" businesses), but it helps students interested in business law recognize the role of transactional lawyers in social justice. In addition to fulfilling the experiential graduation requirement, the clinic also fulfills the planning and drafting requirement by requiring the students to not only identify and assess a particular client's legal issues, but also draft documents that meet the client's current needs and help avoid future issues. Impact on other units: None expected. Financial impact: None expected.

REVISE TITLE, HOURS, AND DESCRIPTION

Law 941 Real Estate Transactions Seminar (2-3) Simulated representation of some of the various parties – sellers, buyers, real estate agents, tenants, acquisition lenders, construction lenders, permanent lenders, architects, contractors, subcontractors, consultants, and others – in the acquisition, financing, development, refinancing, leasing, or other use of real estate. Negotiation and drafting of some of the documents that are central to large real estate transactions.
Repeatability: Not repeatable. May be taken once for 2 or 3 hours.

Formerly: Land Acquisition and Development Seminar (2)
Simulated representation of various parties: sellers, buyers, construction lenders, permanent lenders, architects, contractors, subcontractors and consultants, in development of real estate project. Negotiation and drafting of documents essential in large commercial development.

Rationale: The course as currently listed focuses on real estate development projects. Students draft and negotiate some of the acquisition, financing, and construction documents necessary to constructing a new building. The proposed change would expand the course coverage to allow drafting and negotiation of other documents related to many different aspects of real estate practice, including the purchase and sale of existing buildings, leases, real estate agency contracts, and refinancings. I anticipate that the course will vary somewhat from year to year, reflecting, perhaps, changes in the market over time and student and instructor interest. Many of the topics that might be covered under this broader description are not offered elsewhere in our curriculum but go beyond the limitations of the current course description. The possible increase in hours allows for greater flexibility in terms of permitting increased focus on drafting and negotiation. Impact on other units: None expected. Financial impact: None expected. Additional Documentation: None required.

REVISE TITLE

Law 896 Employment Law (3)

Formerly: Law of the Workplace

Rationale: The new title is a more accurate description of the essence of the course. Students sometimes register for the course believing that the course covers labor law. The new title will establish three employment classes (Employment Discrimination Law, Labor Relations Law, and Employment Law) whose names will help distinguish the content for students. The course is also taught as

"Employment Law" at the vast majority of other law schools in the country. Impact on other units: None expected. Financial impact: None expected. Additional Documentation: None required.

Law 940 Real Estate Finance Law (3)

Formerly: Land Finance Law

Rationale: The name for this course is, and always has been, too narrow. The implication of the word "land" is that the course focuses solely on the dirt. In fact, the course covers "real estate," meaning the land and anything permanently attached to it. This includes, most importantly, improvements, as well as timber, crops, and minerals. The new name will reflect the reality of what the course coverage has been for many years. Impact on other units: None expected. Financial impact: None expected. Additional Documentation: None required.

REVISE DESCRIPTION

Law 904 Construction Law Cases and Studies (3) This course is one option for the capstone to the CLAEC Certificate. Students will complete a simulation involving case studies designed to lead to simulated hearings and other dispute resolution proceedings (including arbitration) involving a construction and engineering dispute.

Formerly: Reviewing actual case studies, students prepare for simulated hearings and other dispute resolution proceedings involving a construction and engineering dispute, including arbitration. This course is the capstone to the Construction Law Certificate Program.

Rationale: Course description revised to indicate that the class is one way of satisfying the capstone requirement for the Certificate in Contractual and Legal Affairs in Engineering and Construction. Impact on other units: The College of Engineering agrees with the change. Financial impact: None expected. Additional Documentation: None required.

Law 996 Tennessee Law Review (1) Performance of duties as staff member or editor of Tennessee Law Review. Responsibilities vary each semester as specified in Tennessee Law Review Policy Manual: writing of case note, comment or article, and/or performance of other assigned duties related to operations of Tennessee Law Review. Completion of potentially publishable comment or article for Tennessee Law Review satisfies expository writing requirement. Members receive one hour of credit for successfully completing one semester of service.

Formerly: Performance of duties as staff member or editor of Tennessee Law Review. Responsibilities vary each semester as specified in Tennessee Law Review Policy Manual: writing of case note, comment or article, and/or performance of other assigned duties related to operations of Tennessee Law Review. Completion of potentially publishable comment or article for Tennessee Law Review satisfies expository writing requirement.

Rationale: The current description does not make clear that credit hours are awarded at the end of each semester. This change makes that point clear. Impact on other units: None expected. Financial impact: None expected.

II. PROGRAM CHANGES

(Submitted simultaneously with the College of Engineering)

REVISE REQUIREMENTS: CONTRACTUAL AND LEGAL AFFAIRS IN ENGINEERING AND CONSTRUCTION GRADUATE CERTIFICATE

In the 2018-2019 Graduate Catalog, under the Primary courses heading revise as shown below:

- CE 584, Construction Conflicts, Claims, and Disputes (3) [waived for law students]
- Law 944, Construction Law (3)
- Capstone: Student in coordination with faculty supervisor for the program will choose one of the following based on availability and interests of student: Law 904 Construction Law Cases and Studies (3); Law 992 Field Placement (3); or Law 994 Independent Study (3).

Formerly:
CE 584, Construction Conflicts, Claims, and Disputes (3) [waived for law students]
Law 994, Independent Study (Capstone) (3)
Law 944, Construction Law (3)

Rationale: Reflects a change to the program allowing students to complete Law 904, Law 992, or Law 994 as means of satisfying the capstone requirement for conferral of the certificate. Law 904 is a simulation class. Law 992 would be an actual experiential class that should provide an equivalent educational experience. Law 994 Independent Study is included as an option for students who are unable to take Law 904 or Law 992 and can be designed to provide an equivalent educational experience. Impact on other units: The College of Engineering agrees with the change. Financial impact: None expected. Additional Documentation: none needed.

COLLEGE OF NURSING

All changes effective Fall 2019

I. COURSE CHANGES

ADD

NURS ~~635~~ **659 Family Nurse Practitioner I (3)** Application of advanced assessment skills, health promotion, and pathophysiologic alterations to develop beginning clinical decision-making skills in the primary care of individuals and their families.
(DE) Prerequisite: NURS 504, 505, 515.
Registration Restriction(s): Doctorate of Nursing Practice students or admitted to Family Nurse Practitioner graduate certificate. Minimum student level – graduate.

Rationale: Previously there were 3 courses of varying hours in the MSN program. Those courses (NURS 570, 571, 572) are being replaced with DNP courses with consistent credit hours across semesters for didactic and a more extensive clinical practice course.

NURS ~~636~~ **660 Family Nurse Practitioner II (3)** Application of advanced assessment skills, health promotion, and pathophysiologic alterations emphasizing advanced clinical decision-making skills in the primary care of individuals and their families.
(RE) Prerequisite: NURS ~~635~~ 659.
Registration Restriction(s): Doctorate of Nursing Practice students or admitted to Family Nurse Practitioner graduate certificate. Minimum student level – graduate.

Rationale: Previously there were 3 courses of varying hours in the MSN program. Those courses (NURSE 570, 571, 572) are being replaced with DNP courses with consistent credit hours across semesters for didactic and a more extensive clinical practice course.

NURS ~~637~~ **661 Family Nurse Practitioner III (3)** Advanced nursing management of complex health problems of individuals and families in all developmental stages.
(RE) Prerequisite: NURS ~~636~~ 660.
Registration Restriction(s): For Doctorate of Nursing Practice students or admitted to Family Nurse Practitioner certificate. Minimum student level – graduate.

Rationale: Previously there were 3 courses of varying hours in the MSN program. Those courses (NURSE 570, 571, 572) are being replaced with DNP courses with consistent credit hours across semesters for didactic and a more extensive clinical practice course.

NURS ~~638~~ **662 Clinical Practice: Family Nurse Practitioner (1-5)** Clinical practice in the role of the Family Nurse Practitioner in a variety of health care settings.
Repeatability: May be repeated. Maximum 15 credit hours.
(RE) Corequisite: NURS ~~635 or 636 or 637~~ 659 or 660 or 661.
Registration Restriction(s): For Doctorate of Nursing Practice students or admitted to Family Nurse Practitioner graduate certificate. Minimum student level – graduate.

Rationale: Previously there were 3 courses of varying hours in the MSN program. Those courses (NURSE 570, 571, 572) are being replaced with DNP courses with consistent credit hours across semesters for didactic and a more extensive clinical practice course.

NURS 650 Wellness, Development, and Behavior of the Pediatric Population (4) Advanced practice nursing of the pediatric population and families focusing on well child care, issues of development and behavior, and nursing interventions for comprehensive and preventative care.
(DE) Prerequisite: NURS 504, 505, 515.
Registration Restriction(s): For Doctorate of Nursing Practice students or admitted to Pediatric Nurse Practitioner certificate. Minimum student level – graduate.

Rationale: Previously the MSN had 2-hour theory courses. To better align all concentration options in the DNP program the theory was changed to 3-hour courses and the clinical a 10-hour course.

NURS 651 Pediatric Nurse Practitioner I: Care of the Pediatric Patient with an Acute Illness (3) Pathophysiology of acute minor illnesses in the pediatric population.
(RE) Prerequisite: NURS 650.
Registration Restriction(s): Doctorate of Nursing Practice or Pediatric Nurse Practitioner graduate certificate programs. Minimum student level – graduate.

Rationale: Previously there were courses of varying hours in the MSN program. Those courses (NURSE 570, 571, 572) are being replaced with DNP courses with consistent credit hours across semesters for didactic and a more extensive clinical practice course.

Rationale: Previously the MSN had 2-hour theory courses. To better align all options areas in the DNP program the theory was changed to 3-hour courses and the clinical a 10 hours course.

NURS 652 Pediatric Nurse Practitioner II: Care of the Pediatric Patient with Chronic Conditions (2)
Pathophysiology and management of chronic conditions in the pediatric patient.
(RE) Prerequisite: NURS 651.
Registration Restriction(s): Doctorate of Nursing Practice or Pediatric Nurse Practitioner graduate certificate programs. Minimum student level – graduate.

NURS 653 Clinical Experiences in the Pediatric Populations (1-5) Pathophysiology and management of chronic conditions in the pediatric patient.
Repeatability: May be repeated. Maximum 15 credit hours.
(RE) Prerequisite: NURS 651.
Registration Restriction(s): Doctorate of Nursing Practice or Pediatric Nurse Practitioner graduate certificate programs. Minimum student level – graduate.

NURS 654 Physiology and Pathophysiology (Peds) (3) Physiology and pathophysiology of complex acute, chronic and critical illnesses in pediatric patients.
(RE) Corequisite NURS 653.
Registration Restriction(s): Doctorate of Nursing Practice or Pediatric Nurse Practitioner graduate certificate programs. Minimum student level – graduate.

Rationale: Previously the MSN had 2-hour theory courses. To better align all options areas in the DNP program the theory was changed to 3-hour courses and the clinical a 10-hour course.

NURS 655 Psychiatric Mental Health Nurse Practitioner (4) Etiologies of mental health, dysregulation and person-centered recovery including evidence–based treatments. Skills in: therapeutic relationship development, advanced holistic assessment, diagnostic reasoning and therapeutic modalities are emphasized.
(DE) Prerequisite(s): NURS 504, 505, 515, 519.
(DE) Corequisite: NURS 656.
Registration Restriction(s): Doctorate of Nursing Practice or Psychiatric Mental Health Practitioner graduate certificate programs. Minimum student level – graduate.

NURS 656 Clinical Practice: PMHNP (5) Clinical experience in adult mental health, dysregulation and person-centered recovery including evidence–based treatments across the lifespan. Skills in: therapeutic relationship development, advanced holistic assessment, diagnostic reasoning and therapeutic modalities are emphasized.
(RE) Corequisite: NURS 655.
Registration Restriction(s): Doctorate of Nursing Practice or Psychiatric Mental Health Practitioner graduate certificate programs. Minimum student level – graduate.

NURS 657 Psychiatric Mental Health Nurse Practitioner II (4) Advanced practice nursing in community settings for families and groups with actual and potential mental health problems.
(DE) Prerequisite: NURS 655, 656.
(DE) Corequisite: NURS 658.
Registration Restriction(s): Doctorate of Nursing Practice or Psychiatric Mental Health Practitioner graduate certificate programs. Minimum student level – graduate.

Rationale: To better align all options areas in the DNP program the theory and clinical hours were separated and more evenly distributed across semesters.

NURS 658 Clinical Practice: PMHNP II (1-5) Clinical experience in advanced practice nursing in community settings for families and groups with actual and potential mental health problems.
Repeatability: May be repeated. Maximum 15 credit hours.
(RE) Prerequisites: NURS 655, 656.
(RE) Corequisite: NURS 657.
Registration Restriction(s): Doctorate of Nursing Practice or Psychiatric Mental Health Practitioner graduate certificate programs. Minimum student level – graduate.

Rationale: To better align all options areas in the DNP program the theory and clinical hours were separated and more evenly distributed across semesters.

Rationale: NURS 501 is replaced by NURS 620. NURSE 510 is replaced by NURSE 622. NURSE 570, 571, 572, 573 are replaced by 635, 636, 637, 638. Other courses are part of the MSN that was transitioned to the DNP and will no longer be offered.

REVISE TO DROP (RE) PREREQUISITE

NURS 603 Nursing Inquiry and Research Design (3)

Formerly: (RE) Prerequisite(s): 601.

Rationale: Course sequencing changes have resulted in NURS 601 and 603 being taken concurrently. Impact on other units: none. Financial impact: None.

II PROGRAM CHANGES

REVISE REQUIREMENTS NURSING MAJOR, DNP

In the 2019-20 Graduate Catalog, revise the last paragraph about admission to candidacy requirement by adding the last sentence shown below in bold font.

Students will be admitted to candidacy after successfully passing a comprehensive examination and defending the DNP Scholarly Project proposal. The DNP Scholarly Project produces a tangible and deliverable academic product that is derived from the practice immersion experience and is reviewed and evaluated by an academic committee. The DNP Scholarly Project committee is composed of a minimum of two doctoral-prepared (DNP or PhD) faculty. When appropriate, a third committee member may be selected, who holds special expertise relative to the specific project. The third member may be a faculty member from another academic unit, or external to the university. **Post-master's degree students will be admitted to candidacy upon completion of all coursework except for NURS 634. BSN-to-DNP students will be admitted to candidacy the semester before they graduate**.

Rationale: This revision is due to sequencing of courses in the 2 tracks. Post-master's students essentially complete all course work prior to beginning scholarly project. Depending on their specialty, BSN-to-DNP students may still be enrolled in clinical courses while beginning scholarly project.

REVISE REQUIREMENTS: NURSING MAJOR, DNP, FAMILY NURSE PRACTITIONER CONCENTRATION

In the 2019-20 Graduate Catalog, revise the course requirements for the FNP concentration as shown below:

Requirements for Family Nurse Practitioner concentration	**Credit Hours**
NURS 504 Advanced Health/Physical Assessment & Diagnostic Reasoning	3
NURS 505 Advanced Clinical Pharmacology	3
NURS 515 Advanced Pathophysiology for Nursing Practice	3
NURS ~~635~~ 659 Family Nurse Practitioner I	3
NURS ~~636~~ 660 Family Nurse Practitioner II	3
NURS ~~637~~ 661 Family Nurse Practitioner III	3
NURS ~~638~~ 662 Clinical Practice: Family Nurse Practitioner	10
Total credit hours	**28**

Formerly:

Requirements for Family Nurse Practitioner concentration	Credit Hours
NURS 501 - Advanced Nursing Research	3
NURS 510 - Theoretical Foundations of Nursing	3
NURS 504 - Advanced Health/Physical Assessment and Diagnostic Reasoning	3
NURS 505 - Advanced Clinical Pharmacology	3
NURS 515 - Advanced Pathophysiology for Nursing Practice	3
NURS 570 - Family Nurse Practitioner I	6
NURS 571 - Family Nurse Practitioner II	3
NURS 572 - Family Nurse Practitioner III	2-4
NURS 573 - Family Nurse Practitioner IV	8
Total	34-36

Rationale: Align degree requirements with AACN Essentials of Doctoral Education for Advanced Nursing Practice [accreditation standards] and best practices of aspirational schools. Impact on other units: None. Financial impact: The program of study will be 4 less credits, but in comparison to the MSN offered previously there is still an overall increase in credit hours.

REVISE REQUIREMENTS: NURSING MAJOR, DNP, PEDIATRIC NURSE PRACTITIONER PRIMARY/DUAL CONCENTRATION

In the 2019-20 Graduate Catalog, revise the course requirements for the PNP concentration as shown below:

Requirements for the Primary/Dual Pediatric Nurse Practitioner concentration	**Credit Hours**
NURS 504 Advanced Health/Physical Assessment & Diagnostic Reasoning	3
NURS 505 Advanced Clinical Pharmacology	3
NURS 515 Advanced Pathophysiology for Nursing Practice	3
NURS 650 Wellness, Development and Behavior of the Pediatric Population	4
NURS 651 Pediatric Nurse Practitioner I: Care of the Pediatric Patient with an Acute Illness	3
NURS 652 Pediatric Nurse Practitioner II: Care of the Pediatric Patient with Chronic Conditions	3
NURS 653 Clinical Experiences in the Pediatric Patient	10
Total Primary PNP concentration credit hours	**29**
Acute Care courses	
NURS 654 Pediatric Nurse Practitioner III: Care of the Child with Complex Acute, Chronic and Critical Illness	3
NURS 653 Clinical Experiences in the Pediatric Population	5
Total Dual PNP concentration credit hours	**37**

Formerly:

Requirements for Pediatric Nurse Practitioner Concentration	Credit Hours
NURS 501 - Advanced Nursing Research	3
NURS 510 - Theoretical Foundations of Nursing	3
NURS 504 - Advanced Health/Physical Assessment and Diagnostic Reasoning	3
NURS 505 - Advanced Clinical Pharmacology	3
NURS 515 - Advanced Pathophysiology for Nursing Practice	3
Primary Care Track courses	
NURS 527 - Clinical Experience in Pediatric Health	5
NURS 528 - Development and Behavior of the Pediatric Population	2
NURS 550 - Pediatric Nurse Practitioner I	2
NURS 551 - Pediatric Nurse Practitioner II	2
NURS 562 - Care of the Pediatric Patient with an Acute Illness	2
NURS 563 - Care of the Pediatric Patient with Chronic Conditions	2
Total	30
Acute Care Track	
NURS 541 - Care of Child with Complex Acute, Chronic, and Critical Illness	2
NURS 527 - Clinical Experience in Pediatric Health	5

Rationale: Align degree requirements with AACN Essentials of Doctoral Education for Advanced Nursing Practice [accreditation standards] and best practices of aspirational schools. Impact on other units: None. Financial impact: None.

REVISE REQUIREMENTS: NURSING MAJOR, DNP, PSYCHIATRIC MENTAL HEALTH NURSE PRACTITIONER CONCENTRATION

In the 2019-20 Graduate Catalog, revise the course requirements for the PMHNP concentration as shown below:

Requirements for the Psychiatric Mental Health Nurse Practitioner concentration	**Credit Hours**
NURS 504 Advanced Health/Physical Assessment and Diagnostic Reasoning	3
NURS 505 Advanced Clinical Pharmacology	3
NURS 515 Advanced Pathophysiology for Nursing Practice	3
NURS 519 Psychopharmacology in Advanced Practice	3
NURS 655 Psychiatric Mental Health Nurse Practitioner I	4
NURS 656 Clinical Practice: PMHNP I	5
NURS 657 Psychiatric Mental Health Nurse Practitioner II	4
NURS 658 Clinical Practice: PMHNP II	5
Total PMHNP concentration credit hours	**30**

Formerly:

Requirements for Psychiatric Mental Health Nurse Practitioner concentration	Credit Hours
NURS 501 - Advanced Nursing Research	3
NURS 510 - Theoretical Foundations of Nursing	3
NURS 504 - Advanced Health/Physical Assessment and Diagnostic Reasoning	3
NURS 505 - Advanced Clinical Pharmacology	3
NURS 515 - Advanced Pathophysiology for Nursing Practice	3
NURS 519 - Psychopharmacology in Advanced Practice	3
NURS 560 - Advanced Practice of Mental Health Nursing I	6
NURS 561 - Advanced Practice Mental Health II	6
Total	**30**

Rationale: Align degree requirements with AACN Essentials of Doctoral Education for Advanced Nursing Practice [accreditation standards] and best practices of aspirational schools. Impact on other units: None. Financial impact: None

REVISE REQUIREMENTS NURSING MAJOR, PHD

In the 2019-20 Graduate Catalog, revise the admission requirement paragraph by adding “DNP” as shown in bold below.

All applicants must hold a Bachelor's degree in nursing from a program accredited by the National League for Nursing Accrediting Commission [NLNAC] or the Collegiate Commission on Nursing Education [CCNE]. Post-graduate applicants must hold a **DNP** or master's degree in nursing or a business or health related field [e.g., MBA, MPH, MHA).

Rationale: Many nurses now have a DNP rather than an MSN.

REVISE REQUIREMENTS NURSING MAJOR, PHD

In the 2019-20 Graduate Catalog, revise by adding requirements for the entry point option of DNP to PhD. Add heading and text below to show requirements for the DNP to PhD option.

Requirements for the DNP to PhD

The following courses are required for all students.	Credit Hours
NURS 601 Philosophy and Knowledge Development for Nursing Science	3
NURS 602 Advanced Statistical Methods for Health Care Research	3
NURS 603 Nursing Inquiry and Research Design	3
NURS 605 Middle-Range Theoretical Formulations for Nursing Science Development	3
NURS 606 Nursing Research Seminar	3
NURS 607 Qualitative Nursing Research	3
NURS 608 Quantitative Nursing Research	3
NURS 611 Advanced Quantitative Nursing Research	3
NURS 610 Review and Critique of Scientific Literature	3
Cognates/Electives	4-6
NURS 600 Doctoral Research and Dissertation	24
Total credit hours	**55-60**

Requirements transferable from DNP students*	
Graduate level Statistics (ex. NURS 511)	3
NURS 609 Research Practicum	3
NURS 612 Health Policy	3
NURS 613 Leadership	3
NURS 615 Research Ethics	2
Cognate	3
Total	**72-74**

*****DNP transcripts will be evaluated to determine equivalency of courses from DNP than may be accepted for the PhD.

Rationale: The MSN in nursing is being phased out and a growing number of nurses have a DNP and no MSN. Many programs have DNP and PhD students take some of the same courses. This entry point option allows students to enter without have to retake courses. Impact on other units: None. Financial impact: None.

+ ADD GRADUATE CERTIFICATE

Pediatric Acute Care Nurse Practitioner Graduate Certificate

In the 2019-20 Graduate Catalog, add heading, text, and requirements for the new Graduate Certificate:

Pediatric Acute Care Nurse Practitioner Graduate Certificate
The College of Nursing offers certificates for nurses who need additional training. A master's degree in nursing is required for admission. This graduate certificate prepares the advanced practice nurse for a career as a pediatric nurse practitioner in the primary or the acute care role. Advanced practice nursing involves the delivery of care, management of resources, interdisciplinary collaboration, and application of technology, information systems, knowledge, and critical thinking.

The total credit hours will vary depending on the student's academic record, clinical experience, and objectives. Students must complete a minimum of 12 credit hours. Certificate coursework must be completed within 2 years of admission. Contact the Nursing Assistant Dean, Graduate Studies for more information.

Students enrolling in the PNP Acute Care certificate must have completed a primary care PNP program and must have a minimum of one year of work in an acute care setting before beginning course work in the acute care courses.

Required courses for Pediatric Acute Care Nurse Practitioner Graduate Certificate Program

NURS 653 Clinical Experiences in the Pediatric Populations	5
NURS 654 Pediatric Nurse Practitioner III: Care of the Child with Complex Acute, Chronic and Critical Illness	3

Rationale: This new certificate is needed because the Certification Board wants the certificates to have the specific name of the certificate that is awarded. This one needs to show “Acute Care” in the title. Impact on other units: None. Financial impact: None.

REVISE CERTIFICATE REQUIREMENTS - PSYCHIATRIC MENTAL HEALTH NURSE PRACTITIONER

In the 2019-20 Graduate Catalog, remove current text for the certificate and replace with the following:

The College of Nursing offers certificates for nurses who need additional training. A master's degree in nursing is required for admission. This graduate certificate prepares advanced practice nurses for a career as a Psychiatric Mental Health Nurse Practitioner. Advanced practice nursing involves the delivery of care, management of resources, interdisciplinary collaboration, and application of technology, information systems, knowledge, and critical thinking.

The total credit hours will vary depending on the student's academic record, clinical experience, and objectives. Students must complete a minimum of 12 credit hours. Certificate coursework must be completed within 2 years of admission. Contact the Nursing Assistant Dean, Graduate Studies for more information.

Requirements for the Psychiatric Mental Health Nurse Practitioner certificate	**Credit Hours**
NURS 519 Psychopharmacology in Advanced Practice	3
NURS 655 Psychiatric Mental Health Nurse Practitioner I	4
NURS 656 Clinical Practice: PMHNP I	5
NURS 657 Psychiatric Mental Health Nurse Practitioner II	4
NURS 658 Clinical Practice: PMHNP II	5
Plus additional credit hours determined by the college	

Formerly: The College of Nursing offers certificates for nurses who need additional training. A master's degree in nursing is required for admission. This post-MSN certificate prepares advanced practice nurses for a career as a Psychiatric Mental Health Nurse Practitioner. Advanced practice nursing involves the delivery of care, management of resources, interdisciplinary collaboration, and application of technology, information systems, knowledge, and critical thinking.

The total credit hours will vary depending on the student's academic record, clinical experience, and objectives. Students must complete a minimum of 12 credit hours. Contact the Assistant Dean, Graduate Studies for more information.

Course requirements are NURS 519, NURS 560, and NURS 561, plus additional credit hours determined by the college.

REVISE CERTIFICATE REQUIREMENTS – PEDIATRIC NURSE PRACTITIONER GRADUATE CERTIFICATE

In the 2019-20 Graduate Catalog, revise the course requirements for the graduate certificate as shown below:

Requirements for Pediatric Nurse Practitioner Primary Care Graduate Certificate Program	**Credit Hours**
NURS 650 Wellness, Development and Behavior of the Pediatric Population	4
NURS 651 Pediatric Nurse Practitioner I: Care of the Pediatric Patient with an Acute Illness	3
NURS 652 Pediatric Nurse Practitioner II: Care of the Pediatric Patient with Chronic Conditions	3
NURS 653 Clinical Experiences in the Pediatric Populations	1-5
Plus additional credit hours as determined by the college	
Total	**12**

Formerly:
Course requirements for the primary care pediatric nurse practitioner program are: NURS 550, NURS 551, NURS 527, NURS 528, NURS 562, NURS 563, plus additional credit hours as determined by the college.

Rationale: The certificate programs were revised to align with the DNP offerings. Impact on other units: None. Financial impact: None.

REVISE CERTIFICATE REQUIREMENTS – FAMILY NURSE PRACTITIONER

In the 2019-20 Graduate Catalog, remove current text for the certificate and replace with the following:

The College of Nursing offers certificates for nurses who need additional training. A master's degree in nursing is required for admission. This graduate certificate prepares advanced practice nurses for a career as a Family Nurse Practitioner. Advanced practice nursing involves the delivery of care, management of resources, interdisciplinary collaboration, and application of technology, information systems, knowledge, and critical thinking. The total credit hours will vary depending on the student's academic record, clinical experience, and objectives. Students must complete a minimum of 12 credit hours. Certificate coursework must be completed within 2 years of admission. Contact the Nursing Assistant Dean, Graduate Studies for more information.

Requirements	**Credit Hours**
NURS ~~635~~ 659 Family Nurse Practitioner I	3
NURS ~~636~~ 660 Family Nurse Practitioner II	3
NURS ~~637~~ 661 Family Nurse Practitioner III	3
NURS ~~638~~ 662 Clinical Practice: Family Nurse Practitioner	1-5
Plus additional credit hours as determined by the college	
Total	**12**

Formerly: The College of Nursing offers certificates for nurses who need additional training. A master's degree in nursing is required for admission. This post-MSN certificate prepares advanced practice nurses for a career as a Family Nurse Practitioner. Advanced

practice nursing involves the delivery of care, management of resources, interdisciplinary collaboration, and application of technology, information systems, knowledge, and critical thinking.

The total credit hours will vary depending on the student's academic record, clinical experience, and objectives. Students must complete a minimum of 12 credit hours. Contact the Assistant Dean, Graduate Studies for more information.

Course requirements are NURS 570, NURS 571, NURS 572, and NURS 573 plus additional credit hours determined by the college.

Rationale: The certificate programs were revised to align with the DNP offerings. Impact on other units: None. Financial impact: None.

REVISE CERTIFICATE REQUIREMENTS: HEALTH POLICY GRADUATE CERTIFICATE

In the 2018-19 Graduate Catalog, remove current text for the certificate and replace with the following:

The College of Nursing in collaboration with the Department of Public Health - College of Education, Health, and Human Sciences and the College of Law offers an interdisciplinary graduate certificate program in health policy. Concurrently-enrolled University of Tennessee graduate students from all disciplines and community members with a Master's degree or higher with an interest in issues related to health and health care are eligible to apply to the graduate certificate program in health policy. The aim of the program is to prepare leaders, practitioners, researchers, and educators from law, nursing, public health, and other disciplines to be active in various policymaking activities. Course experiences will foster the examination and application of current policy research and the development of skills related to policy analysis, research, program evaluation, and advocacy.

Certificate Program Coordinator: Carole R. Myers, cmyers9@utk.edu. If you need further information about the certificate program please contact the appropriate departmental advisor: Law-Zack Buck at zbuck@utk.edu; Public Health-Kathy Brown at kcbrown@utk.edu; and Nursing and all other departments/colleges-Carole R. Myers at cmyers9@utk.edu.

Requirements	**Credit Hours**
PUBH 520 Public Health Policy and Administration or b) PUBH 526, or c) Law 963	3
NURS 612 Health and Policy/Planning (cross listed, same as PUBH 612	3
NURS 614 Preceptorship (cross-listed, same as PUBH 614)	3
Elective(s) selected in consultation with departmental advisor and approved by the certificate program coordinator	3
Total credit hours	**12**

Formerly:
The College of Nursing and Department of Public Health - College of Education, Health, and Human Sciences jointly offer a graduate certificate in health policy to prepare nursing and public health leaders, researchers, and educators to be active in all aspects of policymaking relative to health. The certificate program is designed to build upon and expand concepts from core courses of the curriculum of each discipline's Master's degree programs and the previous experiences and interests of students. Certificate candidates must currently be admitted to a graduate program at the university or hold a terminal degree and be a graduate student in good standing and comply with all other applicable academic policies. Course experiences will foster the examination and application of current policy research and the development of skills related to policy analysis, research, program evaluation, and advocacy.

Requirements

A minimum of four graduate courses will be required for the certificate:

NURS 612 (cross-listed, same as PUBH 612) – 3 credit hours
PUBH 520 – 3 credit hours
NURS 614 (cross-listed, same as PUBH 614), 3 credit hours minimum
Elective(s) – 3 credit hours minimum; must be selected in consultation with assigned certificate program advisor

Total credit hours may vary based on the student's academic record, experiences, and objectives. Students must complete a minimum of 12 credit hours.

The College of Nursing will observe the following grading scale:

A = 92 – 100 4 quality points
B+ = 88 – 91 3.3 quality points
B = 83 – 87 3 quality points
C+ = 78 – 82 2.3 quality points
C = 75 – 77 2 quality points
D = 67 – 74 1 quality point
F = 66 or below 0 quality points

Rationale: The certificate program was revised to reflect the interprofessional offerings that are accepted in other disciplines. Impact on other units: None. Financial impact: None

COLLEGE OF SOCIAL WORK

All changes effective Fall 2019

I. COURSE CHANGES

(SOWK) Social Work

ADD

SOWK 534 Trauma Treatment with Children and Adolescents (3) Intended to prepare students for direct social work practice with traumatized youth and their families within trauma informed care organizations. It centers on building skills necessary to provide developmentally fitting, culturally sensitive techniques, and treatment methods evidenced for facilitating healing of trauma symptoms caused by single events and more complex traumatic experiences. In addition to emphasizing the critical role of the therapeutic relationship that supports feelings of safety and security during trauma treatment, students will develop skills for using creative interventions, art, and play therapy to supplement evidence based trauma informed assessment and treatment approaches.
(RE) Prerequisite(s): 510, 512, 513, 519, 522, 537, 538, 539 and 543 or 544.
Comment(s): Advanced Standing satisfies prerequisites.
Registration Restriction(s): Graduate students only. Minimum student level graduate.
Registration Permission: Non-MSSW students may register with consent of instructor.

SOWK 573 Forensic Social Work (3) Provides an introduction to and overview of the field of forensic social work. Students will be equipped to collaborate with the criminal justice system and to utilize policy and practice skills to work toward ensuring all individuals have the opportunity to be safe, healthy, contributing members of their communities. It provides an opportunity for students to gain knowledge about a system impacting many people and will broadly expose students to the criminal justice system through a focused look at forensic social work. Social workers have increasing opportunities to practice in a diversity of criminal justice settings. Will assist students in developing knowledge and skills for generalist practice in these diverse arenas. Content will focus on forensic social work including ethics, roles, functions, skills; utilization of community assets; the criminal justice system; and trans-systemic interactions.
(RE) Prerequisite(s): 510, 512, 513, 519, 522, 537, 538, 539 and 543 or 544.
Comment(s): Advanced Standing satisfies prerequisites.
Registration Restriction(s): Graduate students only. Minimum student level graduate.
Registration Permission: Non-MSSW students may register with consent of instructor.

Rationale: New elective courses to fulfill requirements of the Trauma Treatment and Forensic Social Work graduate certificate programs. Financial Impact: Will need to hire an adjunct to teach SOWK 573 for the first semester. Impact on other units: None.

DROP

SOWK 676 Social Work Pedagogy in Online Environments (1)

Rationale: Combining content of SOWK 675 and SOWK 676 into one 3-credit course (SOWK 675). See rationale for SOWK 675.

REVISE HOURS AND DESCRIPTION

SOWK 675 Teaching Methods in Social Work (3) History and context of social work education, including curriculum policy and accreditation. Effective teaching techniques, course development, assessment of student learning, and classroom management skills. Best practices for face-to-face and online teaching. Unique characteristics of online teaching and empirically-supported strategies for developing online courses and managing online classroom environments.

Formerly: Teaching Methods in Social Work (2) History and context of social work education, including curriculum policy and accreditation. Effective teaching techniques, course development, assessment of student learning, and classroom management skills.

Rationale: Revised course combines content from two previously separate courses: SOWK 675 Teaching Methods in Social Work (2) and SOWK 676 Social Work Pedagogy in Online Environments (1). Streamlining content into one 3-credit course is more efficient for students. No content is lost by combining the two courses into a single course. Financial Impact: None. Impact on other units: None.

REVISE TITLE

SOWK 533 Trauma Treatment with Adults (3)

Formerly: Trauma Treatment for Adults (3)

SOWK 680 Professional Development for Social Work Scholars II (1)

Formerly: Professional Development for Social Work Scholars (1)

REVISE TITLE, DESCRIPTION, AND DELETE GRADING RESTRICTION

SOWK 630 Professional Development for Social Work Scholars I (1) Preparing for success as a social work doctoral student, familiarity with faculty research, conference abstract and presentation skills, and writing for academic publication.

Formerly: Research Practicum I (1) Individual research experience under the supervision of a faculty mentor.
Grading Restriction: Satisfactory/No Credit grading only.

Rationale for 533: Revised title is necessary to accurately reflect the content of this course, as measured by the course competencies. Rationale for 600 level courses - Creation of a two-semester Professional Development sequence necessary to improve preparation of doctoral students for graduate school and academic career success. First course in the sequence is new; second course in the sequence is re-titled with content and thus description kept the same. Financial Impact: None. Impact on other units: None.

REVISE TITLE AND DESCRIPTION

SOWK 531 Trauma Theory (3) Will immerse students in the theoretical knowledge of trauma types, dynamics, and the neuro-biopsychosocial consequences that individuals who are survivors of maltreatment, interpersonal abuse, manmade/natural disasters, and other types of chronic stress and trauma across the lifespan experience. Will use case examples supplemented with salient readings regarding the epigenetics and neuroscience of trauma, evidence-based assessment practices, to discuss these theories. Particular attention will be paid to effectively and ethically working with cultural status, including race/ethnicity, gender, sexual orientation, socioeconomic status, disability status, and others, in understanding and working with traumatized victims and survivors within a strength's perspective. Information will be presented that is applicable to both EBIP and OL students.

Formerly: Trauma Theory and Practice (3) Will immerse students in knowledge and issues related to working ethically and effectively with child, adolescent, and adult victims of child maltreatment, interpersonal traumas, manmade/natural disasters, and other types of chronic stress and trauma. Embeds the student within a theoretical understanding of these traumas, their symptoms, and their evidence-based treatment. The primary mode for gaining such an understanding of these victims and how to work with them is through case examples supplemented with salient readings. Will pay particular attention to cultural status, including race/ethnicity, gender, sexual orientation, socioeconomic status, disability status, and others in understanding and working with traumatized victims and survivors within a strengths perspective. The information presented in this course is applicable to both EBIP and Organizational Leadership students.

II. PROGRAM CHANGES

REVISE REQUIREMENTS – SOCIAL WORK MAJOR, PHD

In the 2018-2019 Graduate Catalog, at specific courses required, remove course SOWK 676 from the list of courses.

Rationale: Course SOWK 676 was dropped.

REVISE REQUIREMENTS – TRAUMA TREATMENT GRADUATE CERTIFICATE

Delivery Options: Traditional (Knoxville and Nashville) and Distance Education

In the 2018-2019 Graduate Catalog, remove current requirements and replace with the following:

The graduate certificate in trauma treatment is intended for currently admitted Social Work graduate students. This certificate provides students with the coursework and practical experience needed to provide trauma-specific, evidence-based interventions, and trauma-informed programming and policy development.

Application standards/procedure:

- To be admitted to this certificate, students must submit a departmental application during the spring semester prior to their concentration year.
- The application deadline is February 1st.
- Advanced standing students should apply within two weeks after admission to the MSSW program.
- Entry into the certificate is on a first serve basis. Students should apply early if interested.
- Students selected for admission must be formally admitted to the certificate through the Office of Graduate Admissions.
    - The application includes a brief personal statement describing reasons for participating in the certificate, professional career goals, and a tentative schedule for the elective courses the student would like to take.

Credit Hours Required: 21

- Required Courses:
    - Three trauma electives (9 credit hours)
        - SOWK 531, 3 credit hours
        - Two of the following:
            - SOWK 529, 3 credit hours

    - SOWK 533, 3 credit hours
    - SOWK 534, 3 credit hours
    - SOWK 540, 3 credit hours
  - All students must take SOWK 531.
  - Students may petition the Trauma Treatment Chair to substitute another trauma-based graduate course for second or third trauma elective.

Additional Course Requirements:

- 12 credit hours in a trauma-specific field placement (i.e., a placement in which more than half of the student's time is spent working with traumatized clients client systems).
- Trauma treatment students are required to elect a concentration field placement that has the opportunity to focus on work with and/or on behalf of populations experiencing trauma. The field placement must be approved by the MSSW Field Coordinator.
- Trauma treatment students will develop a field learning plan in preparation for their concentration field that focuses on trauma-specific learning. The learning plan will include trauma-specific learning goals.

Formerly: The graduate certificate program in trauma treatment is only intended for currently admitted Social Work graduate students. This program provides students with the coursework and practical experience needed to provide trauma-specific, evidence-based interventions, and trauma-informed programming and policy development.

Field Placement Requirements
In addition to course requirements, trauma treatment students are required to elect a second year field placement that has the opportunity to focus on work with and/or on behalf of populations experiencing trauma. The learning plan will include trauma-specific learning goals.

Application Process
In order to be considered for the program, students must apply during the semester prior to their concentration year. The application includes a brief personal statement describing reasons for participating in the program, professional career goals, and a tentative schedule for the elective courses the student would like to take. Applications must be turned in no later than the semester before the first concentration semester begins. Students entering the concentration year either during the summer or fall of the following year will receive information about the program in early November. All applications must be turned in no later than February 15 of the following semester. However, entry into the program is on a first serve basis, so consider applying early if interested. Students entering their concentration year during the spring semester should contact the Chair of the Trauma Treatment Certificate Program during the fall semester preceding their concentration year.
Admission
To be admitted to this program, students must submit an application to the Chair of the Trauma Treatment Certificate Program by February 15.

Requirements
The certificate requires 27 credit hours of graduate course work: 9 elective credit hours specifically designated as trauma specific, 3 selective course credit hours with one assignment in the course on a trauma-specific topic (for OL students, this assignment will be done in an additional concentration course), 3 concentration course credit hours with one assignment in the course on a trauma-specific topic, and 12 credit hours in a trauma-specific field placement (i.e., a placement in which more than half of the student's time is spent working with traumatized clients client systems). All graduate certificates require 3 credit hours (1 course) over and above that which is required for the MSSW program.

Trauma treatment students are required to complete the following free on-line training prior to the start of their concentration year: Trauma Focused Cognitive Behavioral Therapy (TF-CBT) http://tfcbt.musc.edu/.

In addition, trauma treatment students will develop a field learning plan in preparation for their concentration field that focuses on trauma-specific learning. The field placement must be approved by the MSSW Field Coordinator.

1) The selective course and the concentration course must include a trauma-specific assignment approved prior to completing the assignment by the Trauma Treatment Administrator for that program. Trauma Treatment students will also work with their instructors to identify an appropriate assignment for their class.

2) Trauma treatment students must take three trauma electives (9 credit hours)
SOWK 531 (3 credit hours) and two of the following:
SOWK 529 (3 credit hours) or SOWK 533 (3 credit hours) or SOWK 540 (3 credit hours)

All students must take SOWK 531. However, students may petition the Trauma Treatment Chair to substitute another trauma-based graduate course for second or third trauma elective.

3) Attend 3 hours of approved online or face-to-face seminars or webinars a semester, for a total of 6 hours. These need to be approved by the Trauma Treatment Administrator for that program. Three hours need to be a macro focus and three hours need to be a micro focus.

Students are advised to refer to the College of Social Work Student Handbook for further information.

Rationale: Revisions made to overall formatting. Changes made to application and admission requirements for clarity and to correct the application deadline. Changes made to certificate requirements because students are now required to take three trauma electives, thus eliminating the need for additional assignments and trainings. Financial Impact: None. Impact on other units: None.

✚ **ADD GRADUATE CERTIFICATE**

Forensic Social Work

In the 2019-2020 Graduate Catalog, add heading and requirements for the Forensic Social Work Graduate Certificate.

Forensic Social Work Graduate Certificate

Degree: Graduate Certificate
Certificate: Forensic Social Work
Concentrations: None
Delivery Options: On-Campus Knoxville

Description: The graduate certificate in Forensic Social Work is a partnership between the College of Social Work and the College of Law. The certificate is intended for currently admitted Social Work graduate students. This certificate provides students with the coursework and practical experience needed to provide forensic services and evidence-based interventions in a variety of settings including but not limited to prisons, juvenile justice settings, child welfare, public defender offices and legal aid, programming and policy development.

- Application standards/procedure:
  - Students will receive information about the certificate program at the time of their admission to the MSSW program.
  - To be considered for this certificate, students must submit a departmental application at the time of their admission to the MSSW program.
  - Entry into the certificate program is on a first serve basis. Students should apply early if interested.
  - Students selected for admission must be formally admitted to the certificate program through the Office of Graduate Admissions.
    - The application includes a brief personal statement describing reasons for participating in the program, acknowledgement that they understand there are additional credit hours to be taken beyond the sixty credit hours required for the MSSW, and their professional career goals.
  - Admitted students will be directed to contact the Chair of the Forensic Social Work Certificate to make arrangements to meet the course requirements.
- Credit Hours Required: 23
- Required Courses:
  - 4 credit hours: to be taken during the generalist year of the program:
    - LAW 990 - Legal Research, Writing, and Analysis for the Non-JD Student (2 credit hours)
    - LAW 988 - Structure and Operation of the American Legal System (2 credit hours)
  - 19 credit hours: to be taken during the concentration year of the program:
    - SOWK 573 - Forensic Social Work (3 credit hours)
    - Two electives (2 credit hours each, totaling 4 credit hours) from the College of Law. Students may choose from the following courses:
      - LAW 933 - Elder Law (2 credit hours)
      - LAW 990 - Sex, Gender and Justice (2 credit hours)
      - LAW 990 - Poverty, Race, Gender and the Law (2 credit hours)
      - LAW 990 - Advanced Advocacy and Expert Witnesses (2 credit hours)
    - SOWK 586 - Social Work Advanced Field Placement - 12 credit hours (6 credit hours taken in the Fall semester; 6 credit hours taken in the Spring semester). The field placement focuses on work with and/or on behalf of populations impacted by the legal system (i.e., a placement in which more than half of the student's time is spent working within forensic related systems). Forensic social work students will develop a field-learning plan in preparation for their concentration field that focuses on forensic social work-specific learning. The field-learning plan will include learning goals specific to the arena of forensic social work.
    - The 12 credit hour field placement must be approved by the MSSW Field Coordinator.

Rationale: The United States has one of the highest incarceration rates in the world. Additionally, over 7 million people are currently under some sort of community correctional supervision. Social workers are likely to come into contact with these individuals (and/or their families) regardless of specialization or setting. They should be equipped to collaborate with the criminal justice system and to utilize interpersonal, policy and practice skills to work toward ensuring all individuals have the opportunity to be safe, healthy, contributing members of their communities. The certificate program in Forensic Social Work is a partnership between the College of Social Work and the College of Law. It provides an opportunity for students to gain knowledge about a system impacting millions of people and will broadly expose students to the criminal justice system through a focused look at forensic social work through one course in the MSSW program and courses taken in the College of Law.

Social workers have increasing opportunities to practice in criminal justice settings. This course of study leading to the Certificate in Forensic Social Work seeks to assist students in developing knowledge and skills for practice in diverse arenas. Forensic social work practice requires the knowledge, skill and ethical capacity to balance the mutual and conflicting interests of client and community.

There has been an increase in the number of students interested in forensic social work as evidenced by the increased number of requests for field placements related to the justice system. For instance, more than ten students applied to the Public Defender's Community Law Office (CLO) this past academic year (accepted 3 MSSW, 1 BSSW).

Due to the presence of the College of Law being on the Knoxville Campus, this certificate would be only for the Knoxville campus at this time.

Financial Impact: There will need to be an adjunct hired to teach the new SWOK 573- Forensic Social Work course for the first semester of the student's Concentration Year.

Impact on other units: The College of Law is working with the College of Social Work to allow students to take courses in their College to meet the requirements. Due to the presence of the College of Law being on the Knoxville Campus, this certificate would be only for the Knoxville campus at this time.

REVISE REQUIREMENTS – VETERINARY SOCIAL WORK GRADUATE CERTIFICATE

In the 2018-2019 Graduate Catalog, remove current program of study requirements and replace with the following:

Requirements:

- Credit Hours Required: 24
- Required Courses:
  - SOWK 567 (3)
  - SOWK 557 (3)
- 3 credit hours graduate SOWK elective (in consultation and with approval of the director of the VSW Graduate Certificate).
- For students in the MSSW Evidence-Based Interpersonal Practice (EBIP) concentration, 3 credit hours with assignment in the course on a veterinary social work topic. Select from SOWK 570, SOWK 571, or SOWK 572.
- For students in the MSSW Organizational Leadership concentration, 3 credit hours with assignment in the course on a veterinary social work topic. Select from SOWK 545, SOWK, 546, SOWK 548, or SOWK 549.
- 12 credit hours in a field placement with a veterinary social work component.

Formerly:
Program of Study
The certificate program consists of 21 credit hours of graduate course work:
3 credit hours of veterinary social work course (SOWK 567)
3 elective credit hours (SOWK 557)
For EBIP students - 3 selective credit hours with assignment in the course on a veterinary social work topic (SOWK 570, SOWK 571 or SOWK 572)
For Organizational Leadership students - 3 required concentration credit hours with assignment in the course on a veterinary social work topic (SOWK 545, SOWK 546, SOWK 548 or SOWK 549)
12 credit hours in a field placement with a veterinary social work component

COLLEGE OF VETERINARY MEDICINE

All changes effective Summer 2019

Learning objectives for the DVM degree:

1. Demonstrate professional skills of a veterinarian, including overall clinical competencies (technical and nontechnical), problem solving, and professionalism.
2. Students will perform at or above the national mean on North American Veterinary Licensing Examination (NAVLE).
3. Clinical Competency 1: Ability to diagnose patient problems, interpret clinical laboratory findings, and manage patient records.
4. Clinical Competency 2: Ability to plan patient treatment, including identifying referral when indicated.
5. Clinical Competency 3: Demonstrate basic surgery skills and technical skills.
6. Clinical Competency 4: Demonstrate basic medical skills and case management.
7. Clinical Competency 5: Design and implement basic anesthesia protocols, conduct appropriate pain management plans, and conduct appropriate animal welfare management.
8. Clinical Competency 6: Demonstrate basic emergency and intensive care case management.
9. Clinical Competency 7: Address strategies of health promotion, disease prevention and biosecurity, zoonotic and food safety issues involving animals and humans.
10. Clinical Competency 8: Demonstrate appropriate communication methods, including client communication and medical personnel communication.
11. Clinical Competency 9: Demonstrate awareness of research in furthering the practice of veterinary medicine.
12. Demonstrate overall professionalism.

I. COURSE CHANGES

(VMP) VETERINARY MEDICINE – Pre-Clinical

REVISE TITLE

VMP 814 Physiology and Microscopic Anatomy I (4)

Formerly: Physiology and Microanatomy I

Rationale: This course is part I of a two-series course. The second course is named Physiology and Microscopic Anatomy II. We wish to change the name of this course so that they both match. The course coordinator suggested microscopic anatomy as a more appropriate phrasing. Impact on other units. None. Financial impact: None.

(VMC) VETERINARY MEDICINE – Clinical

DROP

VMC 870 Beef Cow-Calf Summer Institute Elective (2)

Rationale: This course was offered in partnership with Virginia Tech, and that institution no longer offers this course. The course is an elective clinical rotation and does not affect the core curriculum for the college. Impact on other units: None. Financial impact: None.

II. PROGRAM CHANGES

REVISE REQUIREMENTS, VETERINARY MEDICINE MAJOR, DVM

In the 2019-2020 Graduate Catalog, under the Requirements heading, revise the last paragraph as follows:

Students in the second semester of the 3rd year are required to pass a comprehensive examination prior to transitioning to clinical training. The curriculum requires demonstrated competency of a minimum of 200 clinical skills by the conclusion of the 9th semester. With the Class of 2020, beginning in fall 2018, the curriculum requires successful completion of 163 credit hours. With the Class of 2021, beginning in fall 2018, the curriculum requires successful completion of 162 credit hours.

Formerly:
Students in the second semester of the 3rd year are required to pass a comprehensive examination prior to transitioning to clinical training. The curriculum requires demonstrated competency of a minimum of 200 clinical skills by the conclusion of the 9th semester and successful completion of 165 credit hours, with the following exceptions: With the Class of 2020, beginning in fall 2018, the curriculum requires successful completion of 161 credit hours. With the Class of 2021, beginning in fall 2018, the curriculum requires successful completion of 160 credit hours.

Rationale: The changes are to correct mathematical error. The students in the affected classes/cohorts will have amassed these corrected numbers of credit hours due to core course requirements. Impact on other units: None. Financial impact: None.