1-25-2016

Curriculum Committee Report - January 25, 2016

Graduate Council

Monday January 25, 2016 1:30 p.m.	Graduate Curriculum Report	Haslam Business Bldg Room 327

REPORT

Present: David Bemis, Stergios Botzakis, Hans DeSmidt, Robert Fuller (Chair), Sibyl Marshall, Nathan Meek, Andreas Nebenfuehr, Avigail Sachs, Matthew Theriot

Representing the Colleges: Dania Bilal, Millie Cheatham, Stephen Kania, Claudia Kirk, Alex Long, Brent Mallinckrodt, Masood Parang, Joan Rentsch, Marian Roman, John Stier

Also in attendance: Mary Albrecht and Catherine Cox

The meeting was called to order by Robert Fuller at 1:30 p.m. The following curriculum proposals were approved as presented for recommendation to Graduate Council. The meeting adjourned at 2:45.

College of Agricultural Sciences and Natural Resources

Course adds: 4
Course drops: 1
Course revisions: 23 — 28 course changes

Watershed Minor: revise requirements

Interdepartmental

Drop major and 10 concentrations – Plants, Soils and Insects major, PhD
Add major and 6 concentrations – Plant, Soil, and Environmental Sciences major, PhD

Department of Entomology and Plant Pathology

Drop participation from the PSI major.

Department of Plant Sciences

Drop major and 10 concentrations – Plants, Soils and Insects major, PhD
Add major and 6 concentrations – Plant, Soil, and Environmental Sciences major, PhD

College of Architecture and Design

No course revisions

School of Architecture

Add accelerated Dual M.Arch – MLA Program

School of Landscape Architecture

Add accelerated Dual MLA – M.Arch Program

College of Arts and Sciences

Course adds: 25
Course drops: 14
Course revisions: 37 — 76 course changes

Haslam College of Business

Course adds: 9
Course drops: 6
Course revisions: 16 — 31 course changes

College of Communication and Information

Course adds: 3
Course drops: 1
Course revisions: 4 — 8 course changes

School of Information Sciences

Add Certificate: Youth Informatics

College of Education, Health, and Human Sciences

Course adds: 21
Course drops: 12
Course revisions: 19 — 52 course changes

Department of Educational Leadership and Policy Studies

Drop Certificate: University Research Administration

Department of Educational Psychology and Counseling

Add Certificate: Deafness Rehabilitation

Drop Psychosocial Rehabilitation concentration - Counseling major, MS

Department of Public Health

Add accelerated MPH-DVM dual degree program with College of Veterinary Medicine

Department of Theory and Practice in Teacher Education

Drop concentration: Reading Education (Teacher Education major, MS – Track 1 non-licensure)

Add concentration: Literacy Education (Teacher Education major, MS – Track 1 non-licensure)

Drop concentration: Reading Education (Teacher Education major, EdS)

Add concentration: Literacy Education (Teacher Education major, EdS)

College of Engineering

Course adds: 9
Course drops: 0
Course revisions: 10 19 course changes

Department of Civil and Environmental Engineering

Add Certificate: Contractual and Legal Affairs in Engineering and Construction

Department of Electrical Engineering and Computer Science

Drop concentrations: Computer Engineering major, for both MS and PhD
- Data Fusion
- Data Structures
- Data Visualization

Add concentrations: Computer Engineering major, for both MS and PhD
- Cybersecurity
- Data Analytics

Add concentrations: Computer Science major, for both MS and PhD
- Computational Imaging concentration
- Computer-Human Interaction concentration
- Cybersecurity concentration
- Cyberinfrastructure concentration
- Data Mining concentration
- Data Analytics concentration
- Data Visualization concentration
- Discrete Optimization concentration
- High Performance Computing concentration
- Intelligent Systems and Machine Learning concentration
- Life Science Applications concentration
- Software Systems concentration

Drop concentrations: Electrical Engineering major, for both MS and PhD
- Circuit Theory concentration
- Communication Theory concentration
- Computers concentration
- Electro-optics concentration
- Electromagnetic Theory concentration
- Plasma Engineering concentration

Add concentrations: Electrical Engineering major, for both MS and PhD
- Automotive Manufacturing and Technology concentration
- Communications concentration
- Electromagnetics and RF Circuits concentration
- Fire Protection Engineering concentration

Department of Materials Science and Engineering

Add concentration: Materials Science and Engineering major, for both MS and PhD
- Automotive materials concentration

Department of Mechanical, Aerospace, and Biomedical Engineering

Add concentration: Mechanical Engineering major, for both MS and PhD
- Automotive Manufacturing Simulation and Design concentration

College of Law

Course adds: 0
Course drops: 0
Course revisions: 2 — 2 course changes

College of Nursing

Course adds: 0
Course drops: 0
Course revisions: 6 — 6 course changes

Drop concentration: Nursing Administration for the Nursing major, DNP

Add concentration: Nurse Executive Practice for the Nursing major, DNP

College of Social Work

Course adds: 4
Course drops: 0
Course revisions: 10 — 14 course changes

Drop concentration: Management, Leadership and Community Practice, Social Work major, MSSW

Add concentration: Organizational Leadership, Social Work major, MSSW

College of Veterinary Medicine

Course adds: 5
Course drops: 0
Course revisions: 5 — 10 course changes

Add accelerated DVM-MPH dual degree program with College of Education, Health, and Human Sciences, Department of Public Health

Intercollegiate – Comparative and Experimental Medicine

Course adds: 2
Course drops: 3
Course revisions: 1 — 6 course changes

Baker Center for Public Policy

Course adds: 2
Course drops: 0
Course revisions: 0 — 2 course changes

Totals:

Course Adds =	84
Course Drops =	37
Course Revisions =	133
Total course changes =	254

Graduate Curriculum Committee Meeting
January 25, 2016 (Rescheduled meeting)
Haslam Business Building, Room 327

AGENDA

College of Agricultural Sciences and Natural Resources

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

College of Engineering

College of Law

College of Nursing

College of Social Work

College of Veterinary Medicine

Intercollegiate: Comparative and Experimental Medicine

Baker Center for Public Policy

- ♦ **Indicates drop or add of Majors**
- **+ Indicates drop or add of Certificates**
- ➢ **Indicates drop or add of Concentrations**

COLLEGE OF AGRICULTURAL SCIENCES AND NATURAL RESOURCES

All Changes Effective Fall 2016

I. COURSE CHANGES

DEPARTMENT OF AGRICULTURAL LEADERSHIP, EDUCATION AND COMMUNICATIONS

(ALEC) 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 leadership activities which impact a community.

REVISE TITLE

ALEC 551 Servant Leadership in Agriculture and Natural Resources

Formerly: Agricultural Leadership Development

Rationale: To align title with description. Impact on other units: None. Financial impact: None.

REVISE DESCRIPTION

ALEC 524 Research Methodology (3) An introduction to methods and procedures of social science research with an emphasis on acquiring skills necessary to analyze and critique scholarly literature and develop fundamental research plans.

Formerly: Introductory course in social science research methods as they relate to research in agricultural and extension education. Issues studied include research design, reliability and validity in measurement, sampling procedures, logic of analysis, scaling and measurement, and selection and interpretation of appropriate inferential tests of significance.

Rationale: To align course description with concepts that are being taught. Impact on other units: None. Financial impact: None

DEPARTMENT OF AGRICULTURAL AND RESOURCE ECONOMICS

(AREC) 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 TITLE, DESCRIPTION, AND (RE)PREREQUISITES

AREC 542 Decisions, Uncertainty, and Resource Allocation (3) An applied treatment of decision theory concepts pertaining to the allocation of limited resources, including; probability theory; risk; simulation; Markov chains; resource-agent dynamics; game theory; and strategic interaction.
(RE) Prerequisite(s): 505 and 524 or consent of instructor.

Formerly: Advanced Agribusiness Production Decisions (3) Decision theory concepts and tools for analyzing agribusiness decision problems; modeling choices using decision trees and sensitivity analysis; incorporating uncertainty into decision models using probability theory and simulation; modeling preferences using utility theory and risk attitudes.
(RE) Prerequisite(s): 505.

This course supports learning objectives 1, 2, and 3 for the MS Thesis Option.
Support from assessment activities: Minor change; none needed.

Rationale: To align title with description. New description lists the updated major topics covered in the course and reflects its designation as a field course that students can take to meet the 3 hour mandatory microeconomics applications requirement for the MS Agricultural Economics Concentration Thesis Option. Impact on other units: None. Financial impact: None, existing faculty will instruct the course.

AREC 550 Microeconomic Applications to Agricultural and Resource Markets (3) Microeconomic concepts, tools, and decision making approaches for agricultural and natural resource markets; competitive market analysis, strategies by sellers, including price and non-price competition, vertical coordination, market segmentation, and advertising; examination of demand and buyer behavior, including market participation, contingent valuation, and willingness to pay; role of information and innovations in markets.
(RE) Prerequisite(s): 505 and 524 or consent of instructor.

Formerly: 550 Advanced Agribusiness Marketing (3) Use of economic concepts in agribusiness marketing decisions. Analysis of agricultural markets; buyer behavior in food and fiber markets; competitive environment. Profitability analysis of marketing and distribution decisions; market planning and strategy; product evaluation and new product introduction; pricing decisions.
(RE) Prerequisite(s): 505.

This course supports learning objectives 1, 2, and 3 for the MS Thesis Option.
Support from assessment activities: Minor change; none needed.

Rationale: To align title with description. New description lists the updated major topics covered in the course and reflects its designation as a field course that students can take to meet the 3 hour mandatory microeconomics applications requirement for the MS Agricultural Economics Concentration Thesis Option. Impact on other units: None. Financial impact: None, existing faculty will instruct the course.

DEPARTMENT OF ANIMAL SCIENCE (113)

(ANSC) 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. Students will demonstrate capacity to conduct independent, original research important for deriving eventual solutions to problems impacting animal agriculture and humans.

2. Students 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).

ADD

ANSC 531 Comparative Nutritional Biochemistry and Metabolism (4) Nomenclature, structures, functions, utilization, and deficiency symptoms of amino acids and proteins, lipids, carbohydrates, vitamins and minerals in carnivores, omnivores and herbivores. Biochemical pathways and cell signaling, energy availability and utilization, and metabolism of nutrients will be discussed in detail.
Contact Hour Distribution: 3 hours lecture and 1 hour discussion.
Recommended Background: Comparative animal nutrition course and organic chemistry courses.

Rationale: This will serve as a core graduate level class for nutrition-interested graduate students. Increased expectations of graduate students warrant increasing from 400-level course to a 500-level course. Impact on other units: None. Financial impact: None.

DROP 400-LEVEL COURSE FROM GRADUATE CATALOG

ANSC 431 Comparative Nutritional Biochemistry and Metabolism (4)

Rationale: This course is to be dropped from Graduate Catalog but retained in the Undergraduate Catalog. Increased expectations of graduate students warrant dropping 400-level course listing and replacing with a 500-level course. Impact on other units: None. Financial impact: None.

REVISE HOURS AND DROP (RE)PREREQUISITE(S)

ANSC 535 Ruminology (3)

Formerly: (2) and (RE) Prerequisite(s): 530

Rationale: Course material is being revised to include more information on the microbiology of the rumen ecosystem; microbial fermentation and metabolism of polysaccharides, lipids and nitrogen. This will also for graduate students to (1) gain a better understanding of basic microbiology, microbial growth, and ruminal fermentation, (2) account for updated microbiological data and material that is not readily available in current ruminant nutrition/ruminology textbooks, and (3) develop an understanding of the role of rumen microbes and the implications to the provision of nutrients to the host animal. No other course within the University of Tennessee system offers this unique content. The prerequisite is removed as it is no longer offered. Impact on other units: None. Financial Impact: None.

REVISE DESCRIPTION AND (RE) PREREQUISITES

ANSC 420 Advanced Reproductive Techniques (3) Collection, evaluation, and preservation of ova, spermatozoa and embryos; application of methods of natural breeding and techniques of artificial insemination and embryo transfer; herd sire and dam evaluation; pregnancy determination; gestation and parturition; infertility; recent advances in theriogenology. Students completing the course with a grade of C or higher may qualify for certification in artificial insemination.
Prerequisite (RE): 320 with a grade of C or higher.

Formerly: Collection, evaluation, and preservation of ova, spermatozoa and embryos; application of methods of natural breeding and techniques of artificial insemination and embryo transfer; herd sire and dam evaluation; pregnancy determination; gestation and parturition; infertility; recent advances in theriogenology. Students completing the course with a grade of C or higher will receive certification in artificial insemination.
(RE)*Prerequisite: 320.*

Rationale: Revision provides additional clarity and restricts individuals earning less than a C in 320 from registering for this advanced senior level course requiring advanced knowledge. Impact on other units: None. Financial impact: None.

DEPARTMENT OF ENTOMOLOGY AND PLANT PATHOLOGY

(EPP) Entomology and Plant Pathology

Learning outcomes for the M.S. in Entomology and Plant Pathology:

1. Students will have the ability to make professional, effective, and accurate research presentations.
2. Students will compose a scientifically sound, clearly written thesis.
3. Students will be able to coordinate, design, implement, evaluate, and synthesize conclusions for research that provide novel contributions to their subject areas peer-reviewed publication of their work.
4. Students will demonstrate acquisition of general knowledge of bioinformatics and genomics, entomology, nematology, and plant pathology.

Learning outcomes for the Ph.D. in Entomology, Plant Pathology, and Nematology:

1. Students will demonstrate the ability to make professional, effective, and accurate research presentations.
2. Students will plan and perform original research that will be described in a scientifically sound, clearly written dissertation and published in relevant scientific outlets.
3. Students will demonstrate acquisition of relevant subject knowledge of bioinformatics and genomics, entomology, nematology, and plant pathology.
4. Students will demonstrate professional skills and experience in leadership/service, mentoring, academic outreach, extension, and teaching.

REVISE TO ADD CONTACT HOUR DISTRIBUTION

EPP 528 Molecular Techniques in Entomology, Nematology, and Plant Pathology (3)
Contact Hour Distribution: 1 hour lecture and 4 hours lab.

Rationale: The contact hour distribution was added to reflect the correct number of hours spent in lecture and lab each week. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable

EPP 548 Taxonomy of Adult Insects (3)
Contact Hour Distribution: 2 hours lecture and 2 hours lab.

Rationale: Contact hour distribution was added to reflect the correct number of hours spent in lecture and lab each week. This course supports learning outcome 4 for the MS program and learning outcome 3 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

REVISE HOURS, DESCRIPTION, REPEATABILITY; DELETE COMMENTS; ADD REGISTRATION RESTRICTION

EPP 541 Seminar (1) Presentation of research proposals and thesis research by students. Presentations on current topics by outside speakers.
Repeatability: May be repeated. Maximum 2 hours.
Registration Restriction(s): MS students only.

Formerly: (1-2) Review in oral or poster form of literature and current research in entomology or plant pathology, or report on student's thesis research; critique and analysis of presentation effectiveness. Presentations on current topics by outside speakers.
Repeatability: May be repeated. Maximum 6 hours.
Comment(s): Master's students only.

Rationale: The description was changed to accurately reflect that only 1 hour credit for seminar can be taken in a given semester, and that the emphasis of student presentations is on their research proposals and thesis research. This change supports learning outcome 1 for the MS program. Repeatability of the course is limited to 2 hours because all students taking the course for credit must give a presentation. With a large number of students, the number of presentations they give must be limited to reflect the credit hours. The comment is deleted because it should be given as a registration restriction, which has been added. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

REVISE DESCRIPTION AND REGISTRATION RESTRICTION; DELETE COMMENTS

EPP 640 Seminar (1) Presentation of research proposals and dissertation research seminars by students. Presentations on current topics by outside speakers.
Repeatability: May be repeated. Maximum 2 hours.
Registration Restriction(s): Minimum student level – graduate. PhD students only.

Formerly: Review of literature and current research in entomology and plant pathology.
Comment(s): PhD students only.
Registration Restriction(s): Minimum student level – graduate.

Rationale: The description was changed to place the emphasis on student presentations in the form of research proposals and dissertation research, which is the emphasis of learning outcome 1 for the PhD program. The comment was deleted and replaced with a more accurately worded registration restriction for PhD students only. Repeatability was added to indicate that students can only receive two 1-hr credits for this course, which is compatible with our new PhD Program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

REVISE CONTACT HOUR DISTRIBUTION

EPP 520 Nematology (3)
Contact Hour Distribution: 2 hours lecture and 2 hours lab.

Formerly: *Contact Hour Distribution: 2 lectures, 1 lab.*

Rationale: The contact hour distribution was corrected to reflect the actual number of hours spent in lecture and lab each week. This course supports learning outcome 4 for the MS program and learning outcome 3 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

EPP 521 Plant Virology (3)
Contact Hour Distribution: 2 hours lecture and 2 hours lab.

Formerly: *Contact Hour Distribution: 2 hours and 1 lab.*

Rationale: The contact hour distribution was corrected to reflect the correct number of hours spent in lecture and lab each week. This course supports learning outcome 4 for the MS program and learning outcome 3 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

EPP 523 Field Crop and Vegetable Entomology (3)
Contact Hour Distribution: 2 hours lecture and 2 hours lab.

Formerly: *Contact Hour Distribution: Contact Hour Distribution: 2 hours and 1 lab.*

Rationale: The contact hour distribution was corrected to reflect the correct number of hours spent in lecture and lab each week. This course supports learning outcome 4 for the MS program and learning outcome 3 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

EPP 525 Advanced Medical and Veterinary Entomology (3)
Contact Hour Distribution: 2 hours lecture and 2 hours lab.

Formerly: *Contact Hour Distribution: 2 hours and 1 lab.*

Rationale: The contact hour distribution was corrected to reflect the correct number of hours spent in lecture and lab each week. This course supports learning outcome 4 for the MS program and learning outcome 3 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable

EPP 552 Insect Morphology (3)
Contact Hour Distribution: 2 hours lecture and 2 hours lab.

Formerly: *Contact Hour Distribution: 2 hours lecture and 1 lab.*

Rationale: The contact hour distribution was corrected to reflect the correct number of hours spent in lecture and lab each week. This course supports learning outcome 4 for the MS program and learning outcome 3 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

EPP 620 Biodiversity Analysis for Ecosystem Sustainability and Resilience (3)
Contact Hour Distribution: 1 hour lecture and 4 hours lab.

Formerly: Contact Hour Distribution: 1 hour lecture and 2 weekly labs.

Rationale: The contact hour distribution was corrected to reflect the correct number of hours spent in lecture and lab each week. This course supports learning outcome 4 for the MS program and learning outcome 3 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

REVISE CONTACT HOUR DISTRIBUTION AND ADD COMMENTS

EPP 508 Plant Health Diagnostics (3)
Contact Hour Distribution: One week summer workshop.
Comments: Offered in odd years at the Soil, Plant and Pest Center in Nashville, TN, and in even years at the West TN Research and Education Center in Jackson, TN.

Formerly: Contact Hour Distribution: One week summer at the Soil, Plant and Pest Center in Nashville, TN.

Rationale: Comments were added to indicate that a second location for the course had been added, and that the class location would alternate between the two sites each year. The Jackson location will offer disease and pest diagnosis of agronomic field crops, while the Nashville location will focus on diseases of ornamental and horticultural crops. This course supports learning outcome 4 for the MS program and learning outcome 3 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

REVISE CONTACT HOUR DISTRIBUTION AND CREDIT RESTRICTION

EPP 505 Mycology (3)
Contact Hour Distribution: 2 hours lecture and 2 hours lab.

Formerly: Contact Hour Distribution: 2 hours and 1 lab.
Credit Restriction: Students cannot receive credit for both 405 and 505.

Rationale: The contact hour distribution was corrected to reflect the correct number of hours spent in lecture and lab each week. The credit restriction was deleted because EPP 505 has not been taught since fall 2010. This course supports learning outcome 4 for the MS program and learning outcome 3 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

REVISE REPEATABILITY AND REGISTRATION RESTRICTION

EPP 500 Thesis (1-15)
Repeatability: May be repeated. Maximum 15 hours.
Registration Restriction(s): Master of Science - Entomology and Plant Pathology major.

Formerly: *Repeatability: May be repeated.*
Registration Restriction(s): Master of Science – entomology and plant pathology major. Minimum student level – graduate.

Rationale: Minimum student level – graduate removed because it is redundant. This course supports learning outcomes 2 and 3 for the MS program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable

EPP 600 Doctoral Research and Dissertation (3-15)
Repeatability: May be repeated. Maximum 40 hours.
Registration Restriction(s): Doctor of Philosophy - Entomology, Plant Pathology, and Nematology major. PhD students only.

Formerly: *Repeatability: May be repeated.*
Registration Restriction(s): Doctor of Philosophy - Plants, Soils, and Insects major or Entomology, Plant Pathology and Nematology major. Minimum student level – graduate.

Rationale: Only 24 hours of EPP 600 are required. A maximum number of hours was listed to reduce the ability of students to register for an excessive number of credit hours. The name of the PhD program was changed in the registration restriction to reflect the new PhD program and removal of the old program. "PhD students" was substituted for "Minimum student level- graduate," which is less specific. This course supports learning outcome 2 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

REVISE TO DELETE (DE)COREQUISITE; ADD BACK AS (DE)PREREQUISITE

EPP 622 Bioinformatics Applications (3)
(DE) Prerequisite(s): Life Sciences 520 or introductory genetics course.

Formerly: (DE) Corequisite(s): Life Sciences 520 or introductory genetics course.

Rationale: Substitution of "prerequisite" for "corequisite" corrects a mistake that was made when the course was initially listed in the catalog last year. This course supports learning outcome 4 for the MS program and learning outcome 3 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

REVISE (REMOVE) CREDIT RESTRICTION

EPP 512 Soilborne Plant Pathogens (3)

Formerly: *Credit Restriction: Students cannot receive credit for both 512 and 612.*

Rationale: The credit restriction was deleted because EPP 612 has not been taught since fall 2010. This course supports learning outcome 4 for the MS program and learning outcome 3 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

REVISE REGISTRATION RESTRICTION

EPP 603 Research Planning (1-15)
Registration Restriction(s): PhD students only.

Formerly: *Registration Restriction(s): Minimum student level – graduate.*

Rationale: "PhD students only" was substituted for "Minimum student level – graduate" because the latter is less specific. This course supports learning outcome 2 for the PhD program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY

(FDST) Food Science and Technology

ADD 400-LEVEL COURSE FOR GRADUATE CREDIT

FDST 490 Food Product Development (3) Food Science capstone course. Application of principles of food chemistry, food processing and engineering, food microbiology, food laws and regulations, sensory evaluation, and statistics in the development of a food product concept.
Contact Hour Distribution: 2 hours and one 3-hour lab.
(RE) Prerequisite(s):241, 390, 410 or 418, and 421 or 428.
(RE) Corequisite(s): 430.
Registration Restriction(s): Only open to food science majors with science or technology concentrations. Minimum student level – senior.

Rationale: The course is already taught for seniors. Graduate students that have not taken it for undergraduate degree and those coming with majors other than food science and/or from other universities would like to take it but need to have credit hours counted as graduate level. Impact on other units: None. Financial impact: None - will be taught by existing faculty.

DEPARTMENT OF FORESTRY, WILDLIFE AND FISHERIES

Learning Objectives for the M.S. in Forestry

1. Students are able to use appropriate theory to conceptualize research problems.
2. Students are able to use appropriate methods and procedures to achieve specific research objectives.
3. Students are able to speak to professional audiences.
4. Students have mastered information relevant to their dissertation and field of study.

Learning Objectives for the M.S. in Wildlife and Fisheries Science

1. Students are able to use appropriate theory to conceptualize research problems.
2. Students are able to use appropriate methods and procedures to achieve specific research objectives.
3. Students are able to speak to professional audiences.
4. Students have mastered information relevant to their dissertation and field of study.

Learning Objectives for the PhD in Natural Resources

1. Students are able to use appropriate theory to conceptualize research problems.
2. Students are able to use appropriate methods and procedures to achieve specific research objectives.
3. Students are able to speak to professional audiences.
4. Students have mastered information relevant to their dissertation and field of study.

(FWF) Forestry, Wildlife and Fisheries

ADD

FWF 525 Applied Natural Resource Statistics (3) Review and application of advanced statistical techniques to address several quantitative issues encountered within natural resource research and management. Much of the course will focus on analyses of students' current graduate project data, leading to variability from year to year regarding the specific statistical methods covered. Possible topics explored may include, but are not limited to the following: advanced regression, likelihood principles of inference, multivariate statistics, nonparametric methods, modeling, simulation techniques, bootstrapping, repeated measures, trend analysis, and finite population sampling.
(DE)Prerequisites: Statistics 531 or Statistics 537, or Plant Sciences 461/561, or an equivalent comprehensive introductory, graduate-level statistics course.

Rationale: The course will provide graduate students with additional statistical training on techniques common in natural resource disciplines. Impact on other units: Minimal. Financial impact: The course will be team taught by a professor in FWF as part of their expected teaching load. Impact on existing CASNR enrollments: no specific courses affected, course is unique. Source of students (~20) will be FWF graduate students (both MS Wildlife & Fisheries Science and PhD Natural Resources), and graduate students from other departments in CASNR.

This course supports learning objectives 1 and 2 for the M.S. in Forestry and Wildlife and Fisheries Science, and the Natural Resource Ph.D. Program. Support from assessment activities: no specific support, other than employer and departmental advisory board suggestions to provide more graduate offerings.

(WFS) Wildlife and Fisheries Science

ADD

WFS 520 Identification and Ecology of Freshwater Mussels (3) Devoted to the study of shells of freshwater mussel species found in the lakes, rivers, and streams of North America, with special attention given to the fauna of Tennessee.

Rationale: The course will provide students with an introduction to freshwater mussels, which are particularly important to aquatic habitats in Tennessee. Impact on other units: Minimal. Financial impact: The course will be team taught by a professor in FWF as part of their expected teaching load and a specialist employed by the McClung Museum. Impact on existing CASNR enrollments: no specific courses affected, course is unique. Source of students: FWF graduate students (both MS Wildlife & Fisheries Science and PhD Natural Resources), and graduate students from EEB. Anticipated enrollment: 10-15.

This course supports learning objectives 1 and 2 for the M.S. in Wildlife and Fisheries Science. Support from assessment activities: no specific support, other than employer and departmental advisory board suggestions to provide more graduate offerings.

II. PROGRAM CHANGES

REVISE REQUIREMENTS FOR WATERSHED MINOR

In the 2015-16 Graduate Catalog, revise course listings as shown below:

1. Under the heading "Watershed Core courses" add: ENVE 531 and LAR 571.
2. Under the heading "Science/Engineering courses" add: BSE 516, BSET 574, ENVE 525, ENVE 526, ENVE 532, FWF 590, GEOG 433, GEOG 436, GEOG 536, GEOL 535, LAR 513, LAR 571, LAR 583.
3. Under the heading "Science/Engineering courses" remove: ENVE 544, ENVE 595, ESS 442, ESS 511, ESS 512 and LAR 521.
4. Remove heading " Social Science/Law/Philosophy courses" and replace with "Policy, Cultures, and Society courses"
5. Under the revised heading of "Policy, Cultures, and Society courses add: SOC 562, SOC 661 and remove courses PHIL 545 and SOCI 503.

Rationale: all changes suggested by faculty and approved by Watershed Minor Faculty Executive Committee following Watershed Faculty Bylaws. Impact on other units: None. Financial impact: none. Support from assessment activities: Not Applicable

DEPARTMENT OF AGRICULTURAL AND RESOURCE ECONOMICS

REVISE REQUIREMENTS - AGRICULTURAL AND RESOURCE ECONOMICS MAJOR, MS (AGRICULTURAL ECONOMICS CONCENTRATION – THESIS OPTION)

In the 2016-17 *Graduate Catalog* under Thesis Option, change the credit hours of agricultural and resource economics requirement to 19.

Formerly: 16

Rationale: Mandatory courses in agricultural and resource economics for the MS Agricultural Economics Concentration Thesis Option are increased from 16 to 19 hours to mandate a field course in microeconomics applications in the concentration. The three hour increase to

19 mandatory hours matches the 19 mandatory hours for the MS Natural Resource Economics Concentration Thesis Option that includes a required microeconomics applications field course in natural resource economics. Directed electives and electives are reduced from 15 hours to 12 hours to stay within the 31 hour minimum. Impact on other units: None. Financial impact: None.

INTERDEPARTMENTAL

- **DROP MAJOR AND CONCENTRATIONS**

Plants, Soils and Insects, Major, PhD
- Bioactive Natural Products concentration
- Crop Sciences concentration
- Entomology concentration
- Environmental and Soil Sciences concentration
- Horticulture concentration
- Integrated Pest Management concentration
- Plant Breeding concentration
- Plant Molecular Genetics concentration
- Plant Pathology concentration
- Weed Science concentration

- **ADD MAJOR AND CONCENTRATIONS**

Plant, Soil, and Environmental Sciences, Major, PhD
- Crop Sciences concentration
- Environmental and Soil Sciences concentration
- Horticulture concentration
- Plant Breeding concentration
- Plant Molecular Genetics concentration
- Weed Science concentration

Rationale: The Plant, Soil, and Environmental Sciences major is a renaming of the current Plant, Soils, and Insects, PhD major which was an interdepartmental program shared by three departments: Biosystems Engineering and Soil Science, Entomology and Plant Pathology, and Plant Sciences. The name change is appropriate because the Department of Entomology and Plant Pathology removed their involvement from the Plant, Soils, and Insects program as they have obtained a PhD program specific to their department effective fall 2015. The Plant, Soil, and Environmental Sciences major will remain an interdepartmental program for Biosystems Engineering and Soil Science and Plant Sciences. The CIP code will remain as it was for the Plant, Soils, and Insects major as it is still the most appropriate CIP code for the proposed Plant, Soil, and Environmental Sciences major/degree. No THEC or SACS approval is necessary. The Provost's Office has been consulted throughout the process. The change is submitted as a drop and add in order to remain consistent with standard practices, realizing that the actions are really only a name change of an existing program. Impact on other units: will avoid confusion for potential and existing students and stakeholders as the Insects term is no longer relevant to the degree program. No impact on student enrollment or courses in other units is expected. Financial impact: limited to costs of changing website information and any printed materials used for recruiting, which are generally revised regularly anyway. All faculty in Plant Sciences & Biosystems Engineering and Soil Science previously involved in the PSI major will be involved in the Plant, Soil, and Environmental Sciences major. No additional funding for faculty or staff will be necessary. Response to assessment: Not applicable.

DEPARTMENT OF BIOSYSTEMS ENGINEERING AND SOIL SCIENCE

REVISE INTRODUCTORY COLLEGE TEXT

In the 2016-17 Graduate Catalog, revise the second and fourth sentences in the 2nd paragraph to reflect the change in name of the major: from plants, soils, and insects to plant, soil, and environmental sciences.

Rationale: Entomology and Plant Pathology is dropping out of this joint degree. Impact on other units: none. Response to assessment: none. Financial impact: none.

REVISE HEADING AND TEXT – PLANT, SOIL, AND ENVIRONMENTAL SCIENCES (BESS), PHD

In the 2016-17 Graduate Catalog, remove current heading [Plants, Soils, and Insects Major (BESS), PhD] and replace with [Plant, Soil, and Environmental Sciences (BESS), PhD]; also delete the first paragraph under the Environmental and Soil Sciences concentration and replace with the following:

A doctorate with a major in plant, soil, and environmental sciences and a concentration in environmental and soil sciences is offered under a multi-departmental doctoral program. Two departments participate – Plant Sciences and the soils faculty in Biosystems Engineering and Soil Science. Other concentrations within the plant, soil, and environmental sciences doctoral program include crop sciences, horticulture, plant breeding, plant molecular genetics, and weed biology. Focus areas in the environmental and soil sciences concentration include soil and water chemistry; nutrient management; pedology, genesis and classification; environmental climatology; soil biology and biochemistry; and soil physical processes. See the environmental and soil sciences doctoral concentration home page for additional information, http://bioengr.ag.utk.edu/gradStudies/grad_ESS.asp, or contact a faculty member in the area of interest.

Formerly: A doctorate with a major in plants, soils, and insects and a concentration in environmental and soil sciences is offered under a multi-departmental doctoral program. Three departments participate – Plant Sciences, Entomology and Plant Pathology, and the soils faculty in Biosystems Engineering and Soil Science. Other concentrations within the plants, soils, and insects doctoral program

include bioactive natural products, crop sciences, entomology, horticulture, integrated pest management, plant breeding, plant molecular genetics, plant pathology, and weed biology. Focus areas in the environmental and soil sciences concentration include soil and water chemistry; nutrient management; pedology, genesis and classification; environmental climatology; soil biology and biochemistry; and soil physical processes. See the environmental and soil sciences doctoral concentration home page for additional information, http://bioengr.ag.utk.edu/gradStudies/grad_ESS.asp, or contact a faculty member in the area of interest.

Also, add the following text to the bottom of the program description:

See the Biosystems Engineering and Soil Sciences Graduate Student Handbook for additional specific program information (http://bioengr.ag.utk.edu/gradStudies/grad_handbook.pdf), or contact the Graduate Director of the Environmental and Soil Sciences programs.

Rationale: Entomology and Plant Pathology is dropping out of this joint degree. Impact on other units: none. Response to assessment: none. Financial impact: none.

DEPARTMENT OF ENTOMOLOGY AND PLANT PATHOLOGY

REVISE DEPARTMENT INTRODUCTORY DESCRIPTION

In the 2015-16 Graduate Catalog, delete the current paragraph and replace with the following:

The Department of Entomology and Plant Pathology offers a graduate program leading to the Master of Science with a major in Entomology and Plant Pathology and a Doctor of Philosophy with a major in Entomology, Plant Pathology, and Nematology. The Master of Science program has three concentrations: Bioinformatics and Genomics, Entomology, and Plant Pathology. The PhD program has four concentrations: Bioinformatics, Genomics, and Molecular Interactions; Biodiversity and Ecosystem Resilience; Organismal Biology and Ecology; and Sustainable Disease and Integrated Pest Management. For more information about departmental programs, visit the departmental website at https://ag.tennessee.edu/EPP/Pages/default.aspx.

Formerly: The Department of Entomology and Plant Pathology offers a graduate program leading to the Master of Science with a major in Entomology and Plant Pathology and the Doctor of Philosophy through the interdisciplinary Plants, Soils, and Insects program. Students in the entomology concentration may specialize in crop entomology, medical and veterinary entomology, insect biology, insect pest management, or biological control. Students in the plant pathology concentration may specialize in foliar and stem fungus diseases, soilborne pathogens, disease physiology, biocontrol, plant nematology, or virology. For specific information about departmental programs, contact the director of graduate studies or the department head visit the departmental website at https://ag.tennessee.edu/EPP/Pages/default.aspx.

Rationale: Entomology and Plant Pathology will no longer participate in the PSI interdepartmental PhD joint program. Language that includes the PhD program in Entomology, Plant Pathology, and Nematology and information on the concentrations of the MS and PhD programs has been added. Impact on other units: Both the Environmental and Soil Sciences and Plant Sciences degree programs are proposing language to reflect the change in major name. Entomology and Plant Pathology are dropping the Plants, Soils and Insects from their program listing. Response to assessment: Not applicable. Financial impact: none.

REVISE ENTOMOLOGY AND PLANT PATHOLOGY MAJOR, MS

In the 2015-16 Graduate Catalog, under Admission heading, delete current paragraph and replace with the following:

Admission

For admission to the Master of Science program, a student must meet all requirements of the Graduate School of the University of Tennessee, Knoxville, and must have completed at least 24 hours of biological and physical sciences at the undergraduate level. Applicants should submit an online application, a nonrefundable application fee, official transcripts, and official scores from the general portion of the Graduate Record Examination (GRE) to the Office of Graduate Admissions. International students, whose native language is not English, must submit official scores from the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). The online application procedure will also direct the applicant to submit three letters of reference (and/or three Graduate Rating Forms) from persons capable of assessing the applicant's suitability for graduate work, and a statement of career goals and interests in entomology, plant pathology, or bioinformatics and genomics. In the statement letter, the concentration of interest and preferred major professor should be indicated. Applicants are strongly encouraged to make contact with prospective major professors early in the application process. All materials must be submitted electronically directly to the Graduate School.

Formerly: For admission to the Master of Science program, a student must meet all requirements of the of the University of Tennessee, Knoxville, Graduate School and must have completed at least 24 hours of biological and physical sciences at the undergraduate level. To the Office of Graduate Admissions submit online application, application fee, official transcripts, and scores from the general portion of the Graduate Record Examination (GRE). The online application procedure will also direct the applicant to submit three letters of reference (or three Graduate Rating Forms) from persons capable of assessing the applicant's suitability for graduate work, and a statement of career goals and interests in entomology or plant pathology. In the statement letter the concentration of interest and intended major professor should be indicated.

In the 2015-16 Graduate Catalog, under Requirements heading, delete current text and replace with the following:

Requirements

The student and the major advisor will select a minimum of two additional faculty from the University of Tennessee, who hold the rank of assistant professor or above, to serve on the student's thesis advisory committee. The committee should be formed during the first semester of the student's program. The responsibility of this committee is to assist the student in

planning a program of study and carrying out research, and to assure fulfillment of the degree requirements. If the student has a minor, one member of the committee must be a faculty member from the minor department to assist in designating courses required for the minor.

The program requires a written thesis based on original research, which has been approved by the student's thesis advisory committee, completion of a minimum of 24 hours of course work for graduate credit, and 6 hours of EPP 500. Included in the course requirements are two acceptable seminar presentations for 1 credit hour each. An oral final exam must be passed to the satisfaction of the advisory committee after the thesis has been completed. A minor is not required, but may be selected at the option of the student. A minor includes 6 (minimum) to 12 (maximum) credit hours of graduate-level credit in the minor department.

Formerly: The program requires a written thesis based on original research and completion of a minimum of 24 hours of course work for graduate credit, approved by the student's advisory committee. Included in the course requirements are two acceptable seminar presentations for 1 hour each. An oral final exam must be passed to the satisfaction of the advisory committee after the thesis has been completed. The minor includes at least 6 hours and not more than 10 hours of graduate-level credit in the minor department. The student's committee must include a member of the faculty from the minor department to assist in designating courses required for the minor.

REVISE ENTOMOLOGY AND PLANT PATHOLOGY MAJOR, MS (BIOINFORMATICS AND GENOMICS CONCENTRATION)

In the 2015-16 Graduate Catalog, under the Core Curriculum heading delete current text and replace with the following:

Core Curriculum
The student's thesis advisory committee may decide that foundational knowledge of plant pathology and/or entomology is necessary. In this case, students may need to enroll in or audit EPP 313 and/or EPP 321. A student with prior course work and/or experience may petition the EPP faculty for a course exemption(s). An exemption may be granted by majority vote on the basis of documentary evidence, or written and/or oral exams.

Required:
1. EPP 622 (3 hours)
2. At least nine hours selected from the EPP courses listed in the catalog (excluding EPP 500, EPP 502, EPP 541, EPP 640, EPP 675, and EPP 622).
3. At least six hours in bioinformatics or genomics. Current courses available that would meet this requirement include:
   CBE 672 Computational Bioinformatics
   LFSC 520 Genome Science and Technology I (4)
   LFSC 521 Genome Science and Technology II (4)
   LFSC 507 Programming for Biological Data Analysis (3)
   MICR 540/LFSC 517 Genomics and Bioinformatics (3)
4. ANSC 675 Statistical Genomics (3) or another statistics course is highly recommended and usually will be required by the student's committee.

Formerly: The committee may decide that foundational knowledge of plant pathology and/or entomology is necessary. In this case students may need to enroll in or audit EPP 313 and/or EPP 321.In cases where a student believes he/she has had equivalency, the faculty may administer a proficiency exam.
Required:
EPP 622 (3 hours)
At least nine hours selected from the EPP courses listed in the catalog (excluding EPP 500, EPP 502, EPP 541, EPP 640, EPP 675, and EPP 622).
At least six hours in bioinformatics or genomics. Current courses available that would meet this requirement include:
CBE 672 Computational Bioinformatics
LFSC 520 Genome Science and Technology I (4)
LFSC 521 Genome Science and Technology II (4)
LFSC 507 Programming for Biological Data Analysis (3)
MICR 540/LFSC 517 Genomics and Bioinformatics (3)
ANSC 675 Statistical Genomics (3) or another statistics course is highly recommended and usually will be required by the student's committee.

Rationale: Information more accurately reflects descriptions of current programs and admission requirements. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

ADD CATALOG TEXT FOR CONCENTRATION – ENTOMOLOGY AND PLANT PATHOLOGY MAJOR, MS

In the 2016-17 Graduate Catalog, add heading, text, and requirements for the Entomology concentration:

Entomology concentration
Entomology is an interdisciplinary science that specializes in plant, human, and animal health with a focus on problematic and beneficial insects. Students who wish to prepare for further graduate studies or careers as researchers, teachers, Extension specialists, regulators, or practitioners of plant/human/animal health or insect pest management may choose the Entomology concentration.

Core Curriculum
The thesis advisory committee may decide that foundational knowledge of entomology is necessary. In this case, students may need to enroll in or audit EPP 321. A student with prior course work and/or experience may petition the EPP faculty

for a course exemption(s). An exemption may be granted by majority vote on the basis of documentary evidence, or written and/or oral exams.

Required: 2
1. Core Entomology Courses (EPP 530, EPP 548, EPP 552, and EPP 561) (12 hours)
2. Graduate Seminar (EPP 541) (2 hours)
3. Program Electives[1] (10 hours)
4. Thesis (EPP 500) (6 hours)

[1] The remainder of coursework will be selected by the student in consultation with the major professor and thesis advisory committee. Students may elect to have a minor that will complement the concentration, including but not limited to Plant Sciences, Forestry, Fisheries and Wildlife, Wildlife Health, and Statistics. Course(s) in statistical analysis of biological data are highly recommended, but not required.

ADD CATALOG TEXT FOR CONCENTRATION – ENTOMOLOGY AND PLANT PATHOLOGY MAJOR, MS

In the 2016-17 Graduate Catalog, add heading, text, and requirements for the plant pathology concentration:

Plant Pathology is an interdisciplinary science that specializes in plant health with a focus on the organisms that cause plant disease. Students who wish to prepare for further graduate studies or careers as researchers, teachers, Extension specialists, regulators, or practitioners of plant health management may choose the Plant Pathology concentration.

Core Curriculum
The thesis advisory committee may decide that foundational knowledge of plant pathology is necessary. In this case, students may need to enroll in or audit EPP 313. A student with prior course work and/or experience may petition the EPP faculty for a course exemption(s). An exemption may be granted by majority vote on the basis of documentary evidence, or written and/or oral exams.

Required:
1. Core Plant Pathology Courses (EPP 505, EPP 514, EPP 520, EPP 521, and EPP 528) (15 hours)
2. Graduate Seminar (EPP 541) (2 hours)
3. Program Electives[1] (10 hours)
4. Thesis (EPP 500) (6 hours)

[1] The remainder of coursework will be selected by the student in consultation with the major professor and advisory committee. Students may elect to have a minor that will complement the concentration, including but not limited to Plant Sciences, Forestry, and Statistics. Course(s) in statistical analysis of biological data are highly recommended, but not required.

Rationale: A description of the Bioinformatics and Genomics concentration and required courses were added to the catalog last year, but there was no equivalent information for the Entomology or Plant Pathology concentrations. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

REVISE ADMISSION DESCRIPTION – ENTOMOLOGY, PLANT PATHOLOGY, AND NEMATOLOGY MAJOR, PHD

In the 2016-17 Graduate Catalog, revise text under the admission heading as indicated below:

Admission
Applicants must submit an online application, a nonrefundable application fee, official transcripts, and official scores from the general portion of the Graduate Record Examination (GRE) to the Office of Graduate Admissions. International students, whose native language is not English, must submit official scores from the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). In the statement letter and application, the concentration of interest and preferred major professor must be indicated. Applicants are strongly encouraged to make contact with prospective major professors early in the application process.

ADD CATALOG TEXT FOR BIODIVERSITY AND ECOSYSTEM RESILIENCE CONCENTRATION – ENTOMOLOGY, PLANT PATHOLOGY, AND NEMATOLOGY MAJOR, PHD

In the 2016-17 Graduate Catalog, add heading, text, and requirements for the Biodiversity and Ecosystem Resilience concentration:

Biodiversity and Ecosystem Resilience concentration
The following courses are required for students with a concentration in Biodiversity and Ecosystem Resilience. A student with prior course work and/or experience may petition the EPP faculty for an exemption(s). An exemption may be granted by majority vote on the basis of documentary evidence, or written and/or oral exams.

Required
EPP 600 – Dissertation (24 credit hours)
EPP 620 – Biodiversity Analysis for Ecosystem Sustainability and Resilience (3)
EPP 640 – Seminar (2 semesters for 1 credit each); Seminars are only given during academic semesters
EPP 675 – Scientific Writing and Grantsmanship (3)
Advanced quantitative methods course (3)

Required (Six credit hours selected from the list below based on program direction)
EPP 505 – Mycology (3)
EPP 514 – Phytobacteriology (3)
EPP 520 – Nematology (3)
EPP 525 – Medical and Veterinary Entomology (3)
EPP 528 – Molecular Methods in Entomology, Nematology, and Plant Pathology (3)
EPP 530 – Integrated Pest Management (3)
EPP 548 – Taxonomy of Adult Insects (3)
EPP 551 – Biological Control (3)
EPP 552 – Insect Morphology (3)

Electives (Seven credit hours of elective coursework selected from within or outside EPP; examples are provided below. The list is not all-inclusive, as the course needs of individual student programs vary).
EEB 509 – Ecology (3)
EPP 512 – Soilborne Plant Pathogens (3)
ESS 516 – Soil Biology and Biochemistry (3)

ADD CATALOG TEXT FOR BIOINFORMATICS, GENOMICS, AND MOLECULAR INTERACTIONS CONCENTRATION – ENTOMOLOGY, PLANT PATHOLOGY, AND NEMATOLOGY MAJOR, PHD

In the 2016-17 Graduate Catalog, add heading, text, and requirements for the Bioinformatics, Genomics, and Molecular Interactions concentration:

Bioinformatics, Genomics, and Molecular Interactions concentration
The following courses are required for students with a concentration in Bioinformatics, Genomics, and Molecular Interactions. A student with prior course work and/or experience may petition the EPP faculty for an exemption(s). An exemption may be granted by majority vote on the basis of documentary evidence, or written and/or oral exams.

Required
EPP 600 – Dissertation (24 credit hours)
EPP 622 – Bioinformatics Applications (3)
EPP 640 – Seminar (2 semesters for 1 credit each); Seminars are only given during academic semesters
EPP 675 – Scientific Writing and Grantsmanship (3)
Advanced quantitative methods course (3)

Required (Six credit hours selected from the list below based on program direction)
EPP 515 – Physiology of Plant Disease (3)
EPP 521 – Plant Virology (3)
EPP 528 – Molecular Techniques in Entomology, Nematology, and Plant Pathology (3)
EPP 561 – Insect Physiology (3)

Electives (Seven credit hours of elective coursework from within or outside EPP; examples are provided below. This list is not all-inclusive, as the course needs of individual student programs vary).
ANSC 675 – Statistical Genomics (3)
BCMB 510 – Computational Structural Biochemistry (1)
BCMB 511 – Advanced Protein Chemistry and Cellular Biology (3)
BCMB 512 – Advanced Molecular Biology (3)
BCMB 513 – Advanced Protein Biochemistry and Cell Biology II (3)
BCMB 517 – Physical Biochemistry (3)
BCMB 522 – Advanced Plant Physiology I (3)
BCMB 523 – Advanced Plant Physiology II (3)
BME 520 – Systems Biology and Complex System Theory (3)
BME 580 – Computational Cell Biology (3)
CEM 541 – Cellular and Molecular Basis of Disease (2)
CEM 542 – Cellular and Molecular Basis of Disease (2)
ENVE 561 – Climate and Environmental Informatics (3)
ENVE 655 – Environmental Systems Biology (3)
LFSC 507 – Programming for Biological Data Analysis (3)
LFSC 520 – Genome Science and Technology I (4)
LFSC 521 – Genome Science and Technology II (4)
MICR 520 – Microbial Pathogenesis (3)
MICR 540/LFSC 517 – Genomics and Bioinformatics (3)
PLSC 552 – Plant Biotechnology and Genetics (3)
PLSC 553 – Introduction to Plant Breeding (3)
PLSC 554 – Plant Biotechniques (3)
PLSC 610 – Advanced Plant Genomics (2)
PLSC 653 – Advanced Plant Breeding (3)

ADD CATALOG TEXT FOR ORGANISMAL BIOLOGY AND ECOLOGY CONCENTRATION – ENTOMOLOGY, PLANT PATHOLOGY, AND NEMATOLOGY MAJOR, PHD

In the 2016-17 Graduate Catalog, add heading, text, and requirements for the Organismal Biology and Ecology concentration:

Organismal Biology and Ecology concentration
The following courses are required for students with a concentration in Organismal Biology and Ecology. A student with prior course work and/or experience may petition the EPP faculty for an exemption(s). An exemption may be granted by majority vote on the basis of documentary evidence, or written and/or oral exams.

Required
EPP 600 – Dissertation (24 credit hours)
EPP 640 – Seminar (2 semesters for 1 credit each); Seminars are only given during academic semesters
EPP 675 – Scientific Writing and Grantsmanship (3)
Advanced quantitative methods course (3)

Required (One course selected from the list below based on program direction)
EPP 505 – Mycology (3)
EPP 514 – Phytobacteriology (3)
EPP 520 – Nematology (3)
EPP 521 – Plant Virology (3)
EPP 523 – Field Crop and Vegetable Entomology (3)
EPP 525 – Medical and Veterinary Entomology (3)
EPP 530 – Integrated Pest Management

Required (One course selected from the list below based on program direction)
EPP 528 – Molecular Methods in Entomology, Nematology, and Plant Pathology (3)
EPP 551 – Biological Control (3)
EPP 620 – Biodiversity Analysis for Ecosystem Sustainability and Resilience (3)

Electives (Seven credit hours of elective coursework selected from within or outside EPP; examples are provided below. This list is not all-inclusive, as the course needs of individual student programs vary).
ANSC 571/PLSC 571 – Design and Analysis of Biological Research (3)
ANSC 572 – Mixed Linear Statistical Modeling (3)
BSE 555 – GIS and GPS Applications to Biosystems (3)
BZAN 553/STAT 573 – Design of Experiments (3)
CEM 503 – Infectious Disease Modeling (2-3)
CEM 504 – Descriptive Applied Epidemiology (3)
CEM 507 – Epidemiology of Vector-Borne, Bacterial, and Viral Zoonotic Diseases (2)
CEM 601 – Advanced Epidemiology (3)
CEM 602 – GIS and Geographical Epidemiology (3)
PLSC 561 – Statistics for Biological Research (3)
EEB 509 – Ecology (3)
EEB 560 – Biometry (3)
EEB 583 – Zoogeography (3)
STAT 578 – Categorical Data Analysis (3)
STAT 579 – Applied Multivariate Methods (3)
WFS 501 – Ecology and Management of Wildlife Health (3)
WFS 545 – Advanced Population Analysis (3)

ADD CATALOG TEXT FOR SUSTAINABLE DISEASE AND INTEGRATED PEST MANAGEMENT SYSTEMS CONCENTRATION – ENTOMOLOGY, PLANT PATHOLOGY, AND NEMATOLOGY MAJOR, PHD

In the 2016-17 Graduate Catalog, add heading, text, and requirements for the Sustainable Disease and Integrated Pest Management Systems concentration:

Sustainable Disease and Integrated Pest Management Systems concentration
The following courses are required for students with a concentration in Sustainable Disease and Integrated Pest Management Systems. A student with prior course work and/or experience may petition the EPP faculty for an exemption(s). An exemption may be granted by majority vote on the basis of documentary evidence, or written and/or oral exams.

Required
EPP 600 – 24 credit hours
EPP 630 – Advanced Integrated Pest and Pathogen Management (3)
EPP 640 – Seminar (2 semesters for 1 credit each); Seminars are only given during academic semesters
EPP 675 – Scientific Writing and Grantsmanship (3)
Advanced quantitative methods course (3)

Required (Six credit hours selected from the list below based on program direction)
EPP 505 – Mycology (3)
EPP 508 – Plant Health Diagnostics (3)

EPP 512 – Soilborne Plant Pathogens (3)
EPP 514 – Phytobacteriology (3)
EPP 520 – Nematology (3)
EPP 521 – Plant Virology (3)
EPP 523 – Field Crop and Vegetable Entomology (3)
EPP 525 – Medical and Veterinary Entomology (3)
EPP 528 – Molecular Methods in Entomology, Nematology, and Plant Pathology (3)
EPP 530 – Integrated Pest Management (3)
EPP 551 – Biological Control (3)

Electives (Seven credit hours of elective coursework selected from within or outside EPP; examples are provided below. This list is not all-inclusive, as the course needs of individual student programs vary).

ANSC 571/PLSC 571 – Design and Analysis of Biological Research (3)
ANSC 572 – Mixed Linear Statistical Modeling (3)
BSE 555 – GIS and GPS applications to Biosystems (3)
FWF 535 – Environmental Impacts to Natural Ecosystems (3)
PLSC 515 – Agroecology (3)
PLSC 552 – Plant Biotechnology, Genetics and Breeding (3)
PLSC 634 – Advanced Weed Science Principles (3)

Rationale: The EPPN PhD program was approved last year, but no information on the four concentrations or required courses were added to the graduate catalog. Impact on other units: N/A. Financial impact: N/A. Support from assessment activities: N/A.

DROP PARTICIPATION WITH – PLANTS, SOILS, AND INSECTS MAJOR (EPP), PHD

In the 2016-17 Graduate Catalog, delete heading and text for the Plants, Soils, and Insects Major (EPP), PhD

Rationale: EPP will no longer be participating in the PSI interdepartmental program. Impact on other units: None. Financial impact: None. Support from assessment activities: Not Applicable.

DEPARTMENT OF FORESTRY, WILDLIFE AND FISHERIES

REVISE REQUIREMENTS – NATURAL RESOURCES MAJOR (FWF), PHD

In the 2016-17 Graduate Catalog, under the Professional Development (5 hours) heading, delete the second bullet (Problem Solving). Text will now have two bullets (Teaching and Professional Communication).

Formerly: Professional Development (5 hours)
Teaching – All students will be expected to complete Forestry, Wildlife and Fisheries FWF 601 and assist in teaching a course during their tenure in the program.
Problem Solving – Forestry, Wildlife and Fisheries FWF 610 will be required of all doctoral students. This course will include participation in an interdisciplinary team to address a significant national or regional natural resource issue.
Professional Communication – All students will be required to complete FWF 612 two times as part of their program of study.

Rationale: FWF 610 was dropped as a required course two years ago. Impact on other units: Minimal. Financial impact: none.

DEPARTMENT OF PLANT SCIENCES

- **DROP MAJOR AND CONCENTRATIONS**

Plants, Soils and Insects, Major, PhD
- Bioactive Natural Products concentration
- Crop Sciences concentration
- Entomology concentration
- Environmental and Soil Sciences concentration
- Horticulture concentration
- Integrated Pest Management concentration
- Plant Breeding concentration
- Plant Molecular Genetics concentration
- Plant Pathology concentration
- Weed Science concentration

- **ADD MAJOR AND CONCENTRATIONS**

Plant, Soil, and Environmental Sciences, Major, PhD
- Crop Sciences concentration
- Environmental and Soil Sciences concentration
- Horticulture concentration
- Plant Breeding concentration
- Plant Molecular Genetics concentration
- Weed Science concentration

In the 2016-17 Graduate Catalog, revise introductory department text to reflect the name change as follows:

The Department of Plant Sciences offers two graduate degrees – the Master of Science with a major in plant sciences and the Doctor of Philosophy with a major in plant, soil and environmental sciences. For additional information, please visit the departmental homepage. Inquiries may be directed to the Chair, Graduate Committee, Department of Plant Sciences, The University of Tennessee, Knoxville, Tennessee 37996-4561, or plantsciences@utk.edu."

REVISE ADMISSION AND REQUIREMENTS, PLANT SCIENCES MAJOR, MS

In the 2016-17 Graduate Catalog, begin under the Admission heading and delete all text and replace with the following.

Admission
To be considered for admission, students should have a bachelor's degree from an accredited college or university with evidence of ability to do work of graduate quality. Beyond meeting the UT Graduate School minimum cumulative grade point average, successful applicants to the Plant Sciences Graduate program are expected to have at least a 3.0 GPA on a 4.0 scale. Prerequisite courses may be required if the applicant has insufficient background. To the Office of Graduate Admissions submit an online application (with non-refundable application fee), official transcripts, and scores from the general portion of the Graduate Record Examination (GRE) and TOEFL or IELTS, if applicable. The online application procedure will direct the applicant to submit an updated resume or CV, a short statement of professional goals and reasons for applying to Plant Sciences, and contact information for three evaluators who will provide letters of reference. References should be capable of assessing the applicant's suitability for graduate work in plant sciences. Final admission is contingent upon the applicant contacting and obtaining a commitment from a graduate research faculty member to serve as his/her graduate mentor (major professor).

Student Responsibilities and Retention Standards
Students must be fully committed to their graduate program, are expected to participate in departmental and professional activities, and assume full responsibility for knowledge and compliance with rules and regulations of the Graduate Council and Department. Retention is dependent on the student maintaining a 3.0 cumulative grade point average in graduate courses taken at UT and completing other milestones in a timely manner (e.g., forming a committee, completion of coursework, submitting a research proposal, making progress in project or research objectives, and thesis/dissertation preparation).

Dismissal
In addition to failure to meet UT Graduate School expectations leading to academic probation, other reasons for dismissal include failure to make adequate progress towards other degree requirements (e.g., research project, thesis/dissertation preparation), academic dishonesty (e.g., plagiarism, falsification of data), or other forms of gross misconduct as identified by the Office of Equity and Diversity, Human Resources, Dean of Students' Office, *Hilltopics*, or Graduate Council. Dismissal will be accomplished by written notice to the student with a copy to the Graduate School.

Requirements
- Approval of the academic program by the master's committee.
- Successful completion of 12 hours of course work in the major at the graduate level (400 or above), exclusive of Plant Sciences PLSC 502 and PLSC 503.
- With agreement of the graduate student's committee, six of these hours may be satisfied by ART 481; BCMB 412, BCMB 512; BCMB 522, BCMB 523; EDPY 559; EEB 414, EEB 433, EEB 560; ESS 434, ESS 544, ESS 511, ESS 516; GEOG 439; INSC 560; or SOCI 633.
- If approved by the graduate student's committee, graduate level courses taken at another institution (that were not used to meet degree requirements for a previous degree) may be used to meet specific coursework requirements. A majority of coursework must be completed at The University of Tennessee.

For additional information on degree requirements, please see Academic Policies and Requirements for Graduate Students link.

Thesis Option
- Satisfactory preparation of a written thesis proposal and its oral defense to the student's committee.
- Successful completion of 30 hours of graduate credit, which must include 6 hours of PLSC 500. At least 14 of these hours must be numbered 501 or above.
- An understanding of research ethics is also required. This departmentally-enforced requirement may be achieved through coursework (e.g., PLSC/ANSC/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.
- Preparation of a written thesis and its oral defense.

Non-Thesis Option
- Successful completion of 34 hours of graduate credit, which must include 2-4 hours of PLSC 503. At least 22 of these hours must be at the 500 level or above.
- For projects involving human subjects, CITI IRB certification may also be required.
- Completion of a project and preparation of a written report summarizing the project.
- Passing written and oral examinations covering the project and course work.

The major professor, a plant science faculty member at the rank of assistant professor or above, is chair of the student's graduate advisory committee. The student and major professor select the other signatory members of the advisory committee, which should contain at least two other faculty members at the rank of assistant professor or above, one of whom is encouraged to be from outside the Department of Plant Sciences. If a minor degree is sought from another program, the student's committee must include a faculty member from the minor department. Members of the student's advisory committee are expected to contribute expertise relevant to their academic discipline area, to assist in the planning of course work, aid in formulating an appropriate research project and will assess student achievement and performance toward accomplishing other degree requirements, including the research proposal and thesis defense.

Students are expected to choose their graduate advisory committee in their first semester, present proposed coursework and research plan to the committee before the beginning of the second semester, and present a written research project proposal to the committee no later than the third semester of matriculation.

Rationale: These changes reorder and more clearly present information within the catalog description. New clarifications added reflect frequently asked questions and directly state departmental practice and expectation, as well as UT Graduate School policies. A departmentally-enforced requirement for graduate training in Research Ethics supports both MS program Student Learning Objectives 1-3 by reinforcing professionalism relative to research design, implementation, reporting and communication of results. Two additional BCMB courses are included among courses listed as acceptable for up to 6 hours of Plant Sciences' graduate course work and will enhance Student Learning Objective 3. Impact on other units: May optimize enrollment efficiencies in external-to-department courses deemed appropriate for Plant Sciences graduate credit. Financial Impact: None

REVISE REQUIREMENTS, PLANT, SOIL, AND ENVIRONMENTAL SCIENCES MAJOR, PHD

In the 2016-17 Graduate Catalog, revise to show current name of major and delete all text and replace with the following.

The Doctor of Philosophy with a major in plant, soil and environmental sciences and concentrations in crop sciences, horticulture, plant breeding, plant molecular genetics, and weed science is offered under a multi-departmental doctoral program. Two departments participate – Plant Sciences and the soils faculty in Biosystems Engineering and Soil Science. Other concentrations within the plant, soil and environmental sciences major include environmental and soil sciences. Please see the Plant Sciences homepage for additional information, http://plantsciences.utk.edu, or contact a faculty member in the area of interest.

Students may select a formal concentration as a focus of study but this is not a requirement. We recognize that modern research approaches in plant sciences often overlap. Students may specialize in one or more approaches, including plant biotechnology, molecular biology, breeding, genetics, physiology, ecology, culture and management. Research approaches may be applied to model plant systems, public horticulture, turfgrass, weeds, or woody ornamental plants, as well as fruit, vegetable, cereal, grain, or fiber crops.

Admission
Applicants to the PhD program normally will have completed a M.S. degree with thesis before beginning the doctoral program. To the Office of Graduate Admissions submit an online application (with non-refundable application fee), official transcripts, and scores from the general portion of the Graduate Record Examination (GRE) and TOEFL or IELTS, if applicable. The online application procedure will direct the applicant to submit an updated resume or CV, a short statement of professional goals and reasons for applying to Plant Sciences, and contact information for three evaluators who will provide letters of reference. References should be capable of assessing the applicant's suitability for graduate work in plant sciences. Final admission is contingent upon the applicant contacting and obtaining a commitment from a graduate research faculty member to serve as his/her graduate mentor (major professor).

Student Responsibilities and Retention Standards
Students must be fully committed to their graduate program, are expected to participate in departmental and professional activities, and assume full responsibility for knowledge and compliance with rules and regulations of the Graduate Council and Department. Retention is dependent on the student maintaining a 3.0 cumulative grade point average in graduate courses taken at UT and completing other milestones in a timely manner (e.g., forming a committee, completion of coursework, submitting a research proposal, making progress in project or research objectives, and dissertation preparation).

Dismissal
In addition to failure to meet UT Graduate School expectations leading to academic probation, other reasons for dismissal include failure to make adequate progress towards other degree requirements (e.g., research project, dissertation preparation), academic dishonesty (e.g., plagiarism, falsification of data), or other forms of gross misconduct as identified by the Office of Equity and Diversity, Human Resources, Dean of Students' Office, *Hilltopics*, or Graduate Council. Dismissal will be accomplished by written notice to the student with a copy to the Graduate School.

Requirements
The program requires the student to write a dissertation based on original research and complete at least 24 hours of graduate coursework at the 500- and 600- level beyond the master's degree, plus 24 hours of PLSC 600 Doctoral Research and Dissertation. Candidates not having a master's degree must complete a minimum of 48 hours of graduate course work beyond the baccalaureate degree. Coursework must also satisfy the following:

- A minimum of 12 of the 24 hours, or 30 of the 48 hours, must be graded A-F.
- At least 9 hours of the student's course work must be from outside the chosen concentration in the Plant, Soil and Environmental Sciences doctoral program,

- A minimum of 6 hours of courses numbered 601 or higher must be taken at the University of Tennessee, excluding PLSC 602.
- If approved by the graduate student's committee, graduate level courses taken at another institution may be used to meet specific coursework requirements.
- An understanding of research ethics is also required. This departmentally-enforced requirement may be achieved through coursework (e.g., PLSC/ANSC/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.
- A majority of coursework must be completed at the University of Tennessee.

The remainder of coursework will be selected by the student in consultation with the major professor and committee, reflecting the student's area of emphasis and professional objectives. The student's advisory committee may require specific courses in addition to those required by the Plant Sciences graduate program. A majority of this coursework must be completed at the University of Tennessee. An approved program of study must be submitted by the end of the second semester of graduate study.

To fulfill all requirements for the PhD degree, the student must:

- Prepare and defend, to the satisfaction of the student's committee, a written dissertation proposal with oral presentation to the student's committee. This task is to be completed during the first two semesters of graduate study and before enrollment in PLSC 600.
- Pass both written and oral sections of the comprehensive examination, in which candidates are tested on his/her knowledge of the proposed dissertation and related fields.
- Prepare and defend, to the satisfaction of the student's doctoral committee, a written dissertation as well as an oral presentation of the dissertation followed by its oral defense.

The major professor, a plant science faculty member at the rank of assistant professor or above and approved to direct doctoral research by the Graduate Council, is chair of the student's doctoral committee. The student and major professor select the other signatory members of the doctoral committee, which should contain a minimum of three other faculty members at the rank of assistant professor or above, at least one of whom must be from outside the Department of Plant Sciences. The major professor and two committee members must be approved to direct doctoral research by the Graduate Council. If a minor degree is sought from another program, the student's committee must include a faculty member from the minor department. Members of the student's advisory committee are expected to contribute expertise relevant to their academic discipline area, to assist in the planning of course work, aid in formulating an appropriate research project and will assess student achievement and performance toward accomplishing other degree requirements, including the comprehensive exam and dissertation defense.

The doctoral committee should be formalized by the end of the second semester of graduate study, by which time the student will also present proposed coursework and research plan to the committee. The student is expected to present a written research project proposal to the committee no later than the fourth semester of matriculation.

Rationale: These changes reorder and more clearly present information within the catalog description. New clarifications added reflect frequently asked questions and directly state departmental practice and expectation, as well as UT Graduate School policies. A departmentally-enforced requirement for graduate training in Research Ethics supports Plant Sciences' PhD program Student Learning Objectives 1-3 by reinforcing professionalism relative to research design, implementation, reporting and communication of results. Two additional BCMB courses are included among courses listed as acceptable for up to 6 hours of Plant Sciences' graduate course work and will enhance Student Learning Objective 3. Impact on other units: May optimize enrollment efficiencies in external-to-department courses deemed appropriate for Plant Sciences graduate credit. Financial Impact: None.

COLLEGE OF ARCHITECTURE AND DESIGN

All changes effective Fall 2016

II.PROGRAM CHANGES

SCHOOL OF ARCHITECTURE

ADD DUAL M.ARCH - MLA PROGRAM –SCHOOL OF ARCHITECTURE MAJOR, M.ARCH

The School of Architecture and the School of Landscape Architecture in the College of Architecture and Design offer a dual program leading to the conferral of both the Master of Landscape Architecture degree and the Master of Architecture degree. The dual program can be accomplished with approximately 54 fewer hours of coursework than would be required to earn both degrees separately.

The establishment of the dual program addresses the growing need for graduates with an understanding of the disciplinary concepts, skills, and agendas of architecture and landscape architecture. The objective of the dual degree program is to prepare graduates to take leading roles in envisioning and implementing the built environment of the future.

Admission
Applications are accepted for summer semester only (unless admitted to the Advanced Placement track). Applicants for the dual M.Arch/MLA program must make separate applications to and be accepted by the Schools of Architecture and Landscape Architecture. Students should indicate on both applications the intent to pursue the dual M.Arch/MLA program. Students accepted for both the MLA and M.Arch degree programs will be assigned to an advisor from each School. These advisors will be responsible for course approval and supervision of the students' progress through the dual program.

After the M.Arch application deadline of February 1, applications by United States citizens and permanent residents will still be considered as space allows. Additional information is required and different application dates are established by Graduate and International Admissions for international students. Students are encouraged to contact Jason Young (Jason.young@utk.edu), Director of the School of Architecture with any questions.

Requirements
The dual M.Arch/MLA curriculum consists of 136 hours of coursework, 64 hours for the Master Landscape Architecture and 72 hours for the Master of Architecture. The dual degree requires the completion of a thesis.

The dual degree candidate must satisfy the curriculum and graduation requirements of the dual degree curriculum path. Students withdrawing from the dual degree program before completing both degrees will not receive credit toward graduation in either degree program for courses taken in the other degree program, except as such courses qualify for credit without regard to the dual degree program. The M.Arch and the MLA degrees will be awarded upon successful completion of the requirements of the dual program.

Dual M.ARCH/MLA Program

Summer–First Year	Credit Hours
Architecture 501 (Intro to Environmental Design)	2
Architecture 518 (Representation I)	2
Architecture 519 (Representation II)	2
Architecture 538 (Intro to Design)	6
Fall–First Year	
Architecture 511 (History/Theory I)	3
Architecture 539 (Structures I: Steel Construction)	3
Architecture 541 (Design Studio I)	6
Landscape Architecture 521 (Design Communication 1)	3
Spring–First Year	
Architecture 512 (History/Theory II)	3
Architecture 516 (Design Implementation: Construction Methods I)	3
Architecture 540 (Structures II: Concrete Construction)	3
Landscape Architecture 552 (Design Communication 1)	6
Fall–Second Year	
Architecture 58X (Design Studio III)	6
Landscape Architecture 571 (Landform & Hydrology)	4
Landscape Architecture 585 (Design Theory & Methods II)	3
Plant Science 501 (Landscape Plants)	3
Spring–Second Year	
Landscape Architecture 554 (Design Studio IV)	6
Landscape Architecture 572 (Design & Construction I)	3
Landscape Architecture 582 (Professional Practices)	3

Directed elective in Architecture or Landscape Architecture or open elective approved by Directors of Architecture & Landscape Architecture schools	3

Summer	
Landscape Architecture 561 (Practicum/Professional Internship)[1]	3

Fall–Third Year	
Architecture 503 (Modern Architecture History & Theories)	3
Architecture 545 (ECS I: Climate Systems)	3
Landscape Architecture 555 (Design Studio V)	6
Plant Science 421 (Living Systems I: Ecology for Designers)	3

Spring–Third Year	
Architecture 509 (Theory/Practice: Design Integrations)	3
Architecture 546 (ECS II: Light & Sound)	3
Architecture 572 (Design Studio VI)	6
Landscape Architecture 584 (Histories & Theories II)	3

Fall–Fourth Year	
Architecture 5XX (Professional Elective)	3
Architecture 580 (Thesis Prep)	3
Architecture 58X (Design Studio VII)	6
Landscape Architecture 533 (Living Systems III)	3

Spring–Fourth Year	
Architecture 562 (Professional Practice)	3
Landscape Architecture 500 (Thesis)	6
Landscape Architecture 532 (Living Systems II: Plants in Design)	3
Landscape Architecture approved elective	3
Total 136	

[1] LAR 561 can occur in Summer of Second or Third Year. The internship report must be completed before the end of the semester of registration.

ADD DUAL M.ARCH - MLA (ADVANCED PLACEMENT OPTION) – SCHOOL OF ARCHITECTURE, M.ARCH

The School of Architecture and the School of Landscape Architecture in the College of Architecture and Design offer a dual program leading to the conferral of both the Master of Landscape Architecture degree and the Master of Architecture degree. The dual program can be accomplished with approximately 54 fewer hours of coursework than would be required to earn both degrees separately.

The establishment of the dual program addresses the growing need for graduates with an understanding of the disciplinary concepts, skills, and agendas of architecture and landscape architecture. The objective of the dual degree program is to prepare graduates to take leading roles in envisioning and implementing the built environment of the future.

Admission
Applications are accepted for fall semester only for students with a 4-year pre-professional bachelor's degree in architecture. Applicants for the dual M.Arch/MLA program must make separate applications to and be accepted by the Schools of Architecture and Landscape Architecture. Students should indicate on both applications the intent to pursue the dual M.Arch/MLA program. Students accepted for both the MLA and M.Arch degree programs will be assigned to an advisor from each School. These advisors will be responsible for course approval and supervision of the students' progress through the dual program.

After the M.Arch application deadline of February 1, applications by United States citizens and permanent residents will still be considered as space allows. Additional information is required and different application dates are established by Graduate and International Admissions for international students. Students are encouraged to contact Jason Young (Jason.young@utk.edu), Director of the School of Architecture with any questions.

Requirements
The dual M.Arch/MLA curriculum consists of 94 hours of coursework, 52 hours for the Master Landscape Architecture and 42 hours for the Master of Architecture. The dual degree requires the completion of a thesis.

The dual degree candidate must satisfy the curriculum and graduation requirements of the dual degree curriculum path. Students withdrawing from the dual degree program before completing both degrees will not receive credit toward graduation in either degree program for courses taken in the other degree program, except as such courses qualify for credit without regard to the dual degree program. The MArch and the MLA degrees will be awarded upon successful completion of the requirements of the dual program.

Dual M.ARCH/MLA Program (for Architecture Advanced Placement Students)

Fall–First Year	
Architecture 58X (Design Studio III)	6

Landscape Architecture 571 (Landform & Hydrology)	4
Landscape Architecture 585 (Design Theory & Methods II)	3
Plant Science 501 (Landscape Plants)	3
Spring–First Year	
Landscape Architecture 554 (Design Studio IV)	6
Landscape Architecture 572 (Design & Construction I)	3
Landscape Architecture 582 (Professional Practices)	3
Directed elective in Architecture or Landscape Architecture or open elective approved by Directors of Architecture & Landscape Architecture schools	3
Summer	
Landscape Architecture 561 (Practicum/Professional Internship)[1]	3
Fall–Second Year	
Architecture 503 (Modern Architecture History & Theories)	3
Landscape Architecture 555 (Design Studio V)	6
Plant Science 421 (Living Systems I: Ecology for Designers)	3
Architecture approved elective	3
Spring–Second Year	
Architecture 509 (Theory/Practice: Design Integrations)	3
Architecture 572 (Design Studio VI)	6
Landscape Architecture 584 (Histories & Theories II)	3
Architecture approved elective	3
Fall–Third Year	
Architecture 5XX (Professional Elective)	3
Architecture 580 (Thesis Prep)	3
Architecture 58X (Design Studio VII)	6
Landscape Architecture 533 (Living Systems III)	3
Spring–Third Year	
Architecture 562 (Professional Practice)	3
Landscape Architecture 500 (Thesis)	6
Landscape Architecture 532 (Living Systems II: Plants in Design)	3
Landscape Architecture approved elective	3
	Total 94

[1] LAR 561 can occur in Summer of First or Second Year. The internship report must be completed before the end of the semester of registration.

SCHOOL OF LANDSCAPE ARCHITECTURE

ADD DUAL MLA – M.ARCH PROGRAM – LANDSCAPE ARCHITECTURE MAJOR, MLA

In the 2016-17 Graduate Catalog, insert the following dual program and requirements:

Dual MLA – MArch Program – Landscape Architecture, MLA
The School of Landscape Architecture and the School of Architecture in the College of Architecture and Design offer a dual program leading to the conferral of both the Master of Landscape Architecture degree and the Master of Architecture degree. The dual program can be accomplished with approximately 54 fewer hours of coursework than would be required to earn both degrees separately.

The establishment of the dual program addresses the growing need for graduates with an understanding of the disciplinary concepts, skills, and agendas of architecture and landscape architecture. The objective of the dual degree program is to prepare graduates to take leading roles in envisioning and implementing the built environment of the future.

Admission
Applications are accepted for summer semester only (unless admitted to the Advanced Placement track). Applicants for the dual MLA/M.Arch program must make separate applications to and be accepted by the Schools of Landscape Architecture and Landscape Architecture. Students should indicate on both applications the intent to pursue the dual MLA/M.Arch program. Students accepted for both the MLA and MArch degree programs will be assigned to an advisor from each School. These advisors will be responsible for course approval and supervision of the students' progress through the dual program.

After the MLA application deadline of February 1, applications by United States citizens and permanent residents will still be considered as space allows. Additional information is required and different application dates are established by Graduate and International Admissions for international students. Students are encouraged to contact Gale Fulton (gfulton@utk.edu), Director of the School of Landscape Architecture with any questions.

Requirements
The dual MLA /M.Arch curriculum consists of 136 hours of coursework, 64 hours for the Master Landscape Architecture and 72 hours for the Master of Architecture. The dual degree requires the completion of a thesis.

The dual degree candidate must satisfy the curriculum and graduation requirements of the dual degree curriculum path. Students withdrawing from the dual degree program before completing both degrees will not receive credit toward graduation in either degree program for courses taken in the other degree program, except as such courses qualify for credit without regard to the dual degree program. The MLA and the M.ARCH degrees will be awarded upon successful completion of the requirements of the dual program.

Dual MLA - M.ARCH Program

Summer–First Year	Credit Hours
Architecture 501 (Intro to Environmental Design)	2
Architecture 518 (Representation I)	2
Architecture 519 (Representation II)	2
Architecture 538 (Intro to Design)	6
Fall–First Year	
Architecture 511 (History/Theory I)	3
Architecture 539 (Structures I: Steel Construction)	3
Architecture 541 (Design Studio I)	6
Landscape Architecture 521 (Design Communication 1)	3
Spring–First Year	
Architecture 512 (History/Theory II)	3
Architecture 516 (Design Implementation: Construction Methods I)	3
Architecture 540 (Structures II: Concrete Construction)	3
Landscape Architecture 552 (Design Communication 1)	6
Fall–Second Year	
Architecture 58X (Design Studio III)	6
Landscape Architecture 571 (Landform & Hydrology)	4
Landscape Architecture 585 (Design Theory & Methods II)	3
Plant Science 501 (Landscape Plants)	3
Spring–Second Year	
Landscape Architecture 554 (Design Studio IV)	6
Landscape Architecture 572 (Design & Construction I)	3
Landscape Architecture 582 (Professional Practices)	3
Directed elective in Architecture or Landscape Architecture or open elective Approved by Directors of Architecture & Landscape Architecture schools	3
Summer	
Landscape Architecture 561 (Practicum/Professional Internship)[1]	3
Fall–Third Year	
Architecture 503 (Modern Architecture History & Theories)	3
Architecture 545 (ECS I: Climate Systems)	3
Landscape Architecture 555 (Design Studio V)	6
Plant Science 421 (Living Systems I: Ecology for Designers)	3
Spring–Third Year	
Architecture 509 (Theory/Practice: Design Integrations)	3
Architecture 546 (ECS II: Light & Sound)	3
Architecture 572 (Design Studio VI)	6
Landscape Architecture 584 (Histories & Theories II)	3
Fall–Fourth Year	
Architecture 5XX (Professional Elective)	3
Architecture 580 (Thesis Prep)	3
Architecture 58X (Design Studio VII)	6
Landscape Architecture 533 (Living Systems III)	3
Spring–Fourth Year	
Architecture 562 (Professional Practice)	3
Landscape Architecture 500 (Thesis)	6
Landscape Architecture 532 (Living Systems II: Plants in Design)	3
Landscape Architecture approved elective	3
Total 136	

[1] LAR 561 can occur in Summer of Second or Third Year. The internship report must be completed before the end of the semester of registration.

REVISE REQUIREMENTS LANDSCAPE ARCHITECTURE MAJOR, MLA – TRACK 2 (POST-PROFESSIONAL DEGREE) TO ADD NON-THESIS OPTION

In the 2015-16 Graduate Catalog, add heading and text for the non-thesis option as follows:

Non-Thesis Option: Requires a minimum of 42 hours of graduate course work including three approved design studios.

REVISE ADMISSION REQUIREMENTS LANDSCAPE ARCHITECTURE MAJOR, MLA – TRACK 1

In the 2015-16 Graduate Catalog, revise 5th bullet as follows:

The general portion of the Graduate Record Examination (GRE) is recommended but not required.

REVISE ADMISSION REQUIREMENTS LANDSCAPE ARCHITECTURE MAJOR, MLA – TRACK 2

In the 2015-16 Graduate Catalog, revise 7th bullet as follows:

The general portion of the Graduate Record Examination (GRE) is recommended but not required.

REVISE ADMISSION REQUIREMENTS LANDSCAPE ARCHITECTURE MAJOR, MALA

In the 2015-16 Graduate Catalog, revise to remove “Research Degree” from admission heading and revise 4th bullet

The general portion of the Graduate Record Examination (GRE) is recommended but not required.

REVISE ADMISSION REQUIREMENTS LANDSCAPE ARCHITECTURE MAJOR, MSLA

In the 2015-16 Graduate Catalog, revise 4th bullet as follows:

The general portion of the Graduate Record Examination (GRE) is recommended but not required.

COLLEGE OF ARTS AND SCIENCES

All changes effective Fall 2016

PART I. COURSE CHANGES

DEPARTMENT OF ANTHROPOLOGY

(ANTH) Anthropology

ADD

ANTH 596 Evolutionary Biology (3) Presents a critical understanding of the evolutionary processes that shape biological variation, and the effects of those processes on the cellular, organismal, population, and species levels.
Recommended Background: Advanced biological anthropology method and theory, advanced statistics, basic calculus.

Rationale: Competency and knowledge in evolutionary theory is quickly becoming essential for research in many aspects of biological anthropology. This course is needed for better training of students as well as keeping the graduate program in anthropology competitive. Impact on other units: No direct impact. Financial impact: None.

SCHOOL OF ART

(ART) Art

ADD NEW 400-LEVEL COURSE FOR GRADUATE CREDIT

ART 402 Art and Culture (3-4) Examines art, culture and ideology. Course content and format (studio and/or lecture) may vary.
Repeatability: May be repeated if content changes. Maximum 8 hours.
(RE) Prerequisite(s): ARTA 312, ARTA 314, ARTA 330, ARTA 360, ARTB 320, ARTB 340, ARTC 330, or ARTD 350, or permission of instructor.

Rationale: Previously offered as a topics course several times under the title "Young Money Cash Money: On the Ir/Relevance of Culture" by one faculty member. It is now being added with a more general title, to allow multiple faculty members to teach a course that considers art and its relationship to culture from the point of view of artists. The course provides a different perspective from other studio art courses in that it is multidisciplinary, incorporates more theory, and is designed to appeal to students from all areas of art and design as well as students from outside the Art department. Impact on other units: None. Financial impact: None.

(ARTB) Art Three-Dimensional Arts

DROP 400-LEVEL COURSE (COURSE ALSO TO BE DROPPED FROM UG CATALOG)

ARTB 442 Senior Seminar (3)

Rationale: Course is obsolete, replaced by ARTB 496 – Capstone. Impact on other units: None. Financial impact: None.

(ARTD) Art Design/Graphic

REVISE TO DROP REPEATABILITY

ARTD 405 Interaction Design (4)

Formerly: May be repeated. Maximum 12 hours.

Rationale: Course will no longer be repeatable. The content of the course used to be variable but it has now been standardized so it should not be repeated. Impact on other units: None. Financial impact: None.

REVISE TITLE AND DESCRIPTION; REMOVE COMMENT; AND ADD (RE)PREREQUISITE

ARTD 459 Intersections in Design (3) Advanced investigations into the role of design in a broader context.
(RE) Prerequisite(s): ARTD 350 or permission of instructor.

Formerly: Special Topics in Graphic Design
Student- or instructor-initiated course offered at discretion of department that examines a particular perspective within design.
Comment(s): Prerequisites determined by department for individual topic.

Rationale: The title and description change provides greater specificity as to course content to allow for interdisciplinary opportunities. Adding an (RE)Prereqs reflects changes in the major that have taken place in recent years. Impact on other units: None. Financial impact: None.

(ARTH) Art History

ADD NEW 400-LEVEL COURSE FOR GRADUATE CREDIT

ARTH 474 Transatlantic Modernism (3) American-European artistic exchange during the first three decades of the 20th century leading to the creation of an art that was both modern and American. Considers Alfred Stieglitz, Georgia O'Keeffe, Gerald Murphy, Marsden Hartley, Gertrude Stein, Josephine Baker, Arthur Dove, Marcel Duchamp, and others.

Rationale: This course has been offered multiple times as a special topics course. Special topics courses tend not to garner as large enrollments as courses listed in the catalog and on DARS. Adding this course will also insure the course topic appears on students' transcripts and will allow the course to be included in Connections Packages. Impact on other units: None. Financial impact: None.

REVISE DESCRIPTION

ARTH 411 Art of South and Southeast Asia (3) Survey of the art and architecture of the Indian subcontinent and Southeast Asia. The major achievements of each period are examined in relation to their religious, political, and social contexts. Writing-emphasis course.

Formerly: Survey of the art and architecture of the Indian subcontinent and Southeast Asia from 2000 BC to the 20th century. The major achievements of each period are examined in relation to their religious, political, and social contexts. Writing-emphasis course.

ARTH 419 Art of Japan (3) Survey of the art and architecture of Japan from the Neolithic period to the 19th century. The major achievements of each period are examined in relation to their religious, political, and social contexts. Writing-emphasis course.

Formerly: Survey of the art and architecture of Japan from the Neolithic period to the 20th century. The major achievements of each period are examined in relation to their religious, political, and social contexts. Writing-emphasis course.

Rationale: The slight change in course descriptions reflects more accurately the course contents. Impact on other units: None. Financial impact: None.

DEPARTMENT OF BIOCHEMISTRY, CELLULAR AND MOLECULAR BIOLOGY

(BCMB) Biochemistry, Cellular and Molecular Biology

REVISE (RE) PREREQUISITE

BCMB 440 General Physiology (3)
(RE) Prerequisite(s): Biology 160-159 or 113-115 or equivalent.

Formerly: (RE) Prerequisite(s): Biology 160-159 or equivalent.

REVISE (RE) PREREQUISITE ON PRIMARY CROSS-LISTED COURSES

†BCMB 471 Biophysical Chemistry (3)
(RE) Prerequisite(s): Biology 102 or 150-159 or 113-115 or equivalent; and Chemistry 350, 360, 369.
Cross-listed: (Same as Chemistry 471.)

Formerly: (RE) Prerequisite(s): Biology 102 or 150-159 or equivalent; and Chemistry 350, 360, 369.

†BCMB 481 Biophysical Chemistry (3)
(RE) Prerequisite(s): Biology 102 or 150-159 or 113-115 or equivalent; and Chemistry 350, 360, 369.
Cross-listed: (Same as Chemistry 481.)

Formerly: (RE) Prerequisite(s): Biology 102 or 150-159 or equivalent; and Chemistry 350, 360, 369.

Rationale: These BCMB prerequisite changes are necessary because of the botany changes made by the Division of Biology. Impact on other units: Division of Biology initiated revisions. Financial impact: None.

DEPARTMENT OF CHEMISTRY

(CHEM) Chemistry

REVISE TITLE AND DESCRIPTION

CHEM 531 Materials Inorganic Chemistry and Catalysis (3) A survey of the structure properties of contemporary inorganic materials. Topics include structure and bonding, methods of synthesis and characterization, introduction to heterogeneous catalysis.

Formerly: Characteristics of Inorganic Compounds (3) Descriptive chemistry of elements; structure, reactions, kinetics, mechanisms, equilibria, and spectra of coordination, organometallic, bioinorganic compounds.

Rationale: The proposed revision of the course description more accurately reflects what is currently taught in the class. Impact on other units: None. Financial impact: None.

DEPARTMENT OF EARTH AND PLANETARY SCIENCES

(GEOL) Geology

ADD

GEOL 562 Environmental Aqueous Geochemistry (3) A survey of fundamental geochemical principles as applied to the fate and transport of inorganic and organic constituents in natural waters. Topics include thermodynamics, activity-concentration relations, mineral solubility and stability, chemical speciation and redox state of natural waters, and water-rock-biota interactions. Course will emphasize geochemical modeling to test hypotheses, explore assumptions, approximations, and equilibria in natural geochemical systems.
Credit Restriction: Students cannot receive credit for both 462 and 562.
Recommended Background: General Chemistry, Mathematics (through Calculus), Mineralogy, Sedimentology and Stratigraphy, or consent of instructor.

DROP

GEOL 560 Principles of Geochemistry (4)

Rationale: 560 is being dropped and 562 added because the course has been revised to the degree that it needed a new number. Changes include the removal of a lab component, and changes in the material covered. Impact on other units: None. Financial impact: None.

REVISE TITLE

GEOL 596 Geology Colloquium (1)

Formerly: Scientific Presentations

Rationale: The new title better reflects the topic of the coursework. Impact on other units: None. Financial impact: None.

Geology Equivalency Table

Current Course	Equivalent Course Effective Fall 2016
GEOL 560	GEOL 562

DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY

(EEB) Ecology and Evolutionary Biology

REVISE (RE) PREREQUISITES

EEB 414 Plant Anatomy (3)
(RE) Prerequisite(s): Biology 113-114 or Biology 150-160 or equivalent.

Formerly: (RE) Prerequisite(s): Biology 111-112 or Biology 150-160 or equivalent.

EEB 424 Plant Diversity and Evolution (3)
(RE) Prerequisite(s): Biology 102, Biology 114, Biology 150, or Biology 158.

Formerly: (RE) Prerequisite(s): Biology 102, Biology 111, Biology 150, or Biology 158.

EEB 473 Herpetology (3)
(RE) Prerequisite(s): Biology 250 or Biology 260.

Formerly: (RE) Prerequisite(s): Biology 280.

Rationale for 473: The current prerequisite was an error and should have been, from the outset, Biology 250 (General Ecology), not Biology 280. For a few years it will be necessary to include either 250 or 260 as a prerequisite in order to allow students who have taken 250 under the old system to take the course. Impact on other units: None. Financial impact: None.

REVISE (DE) PREREQUISITES

EEB 463 Plant Ecophysiology (4)
(DE) Prerequisite(s): Biology 150 or equivalent; or Biology 114; or permission of instructor.

Formerly: (DE) Prerequisite(s): Biology 150 or equivalent or permission of instructor.

Rationale: Biology is replacing the former botany BIOL 111-112 sequence with a new botany sequence (BIOL 113-114-115) which will be a new entry sequence into the major, necessitating prerequisite changes to many biology, EEB, BCMB, and Microbiology courses. Impact on other units: None. Financial impact: None.

DEPARTMENT OF ENGLISH

(ENGL) English

REVISE PRIMARY COURSES TO DROP SECONDARY CROSS-LISTINGS

†ENGL 452 Modern Drama (3)

Formerly: (Same as Comparative Literature 452.)

†ENGL 454 20th-Century International Novel (3)

Formerly: (Same as Comparative Literature 454.)

Rationale: The Comparative Literature program has been inactive and has had no students for some time. The program is now being dropped. Impact on other units: Cross listed with Comparative Literature. Financial impact: None.

DEPARTMENT OF GEOGRAPHY

(GEOG) Geography

ADD NEW 400-LEVEL COURSES FOR GRADUATE CREDIT

GEOG 412 GIS for Environmental and Socio-economic Applications (3) Integrates spatial analysis and modeling with GIS for real-world environmental and socio-economic applications.
(DE) Prerequisite(s): 411 or consent of instructor.

GEOG 416 GIS Project Management (3) Interactions between management, technical, and application aspects of Geographic Information Systems project through simulated environment of real-world GIS sites.
(DE) Prerequisite(s): 411 or consent of instructor.

GEOG 420 GIS in the Community (3) A service learning course. Devise and implement a project using geographic techniques and technologies.
Recommended background: Prior course experiences including at least one of the following: urban studies, GIS, qualitative or quantitative methods.
Grading Restriction: Letter grade only.
Repeatability: May be repeated with consent of department. Maximum 6 hours.

Rationale: These courses will fill a growing demand among students across campus about GIS knowledge and specialized skills to carry out various real-world applications. Such knowledge and skills tremendously increase job prospects of UT graduates. Impact on other units: No direct impact. Financial impact: None.

GEOG 431 Environmental History from Lake Sediments (3) Analysis of pollen grains, charcoal fragments, and other materials in lake sediments as proxy indicators of past vegetation, climate, human activity, and natural disturbances.
Contact Hour Distribution: 2 hours lecture and 2 hours lab
Recommended Background: Introductory physical geography or course work in botany, ecology, or geology.

Rationale: Much of this material was formerly taught in GEOG 530, which is being dropped. We believe that teaching the course at the 400-level with a scheduled lab will better serve both graduate students and undergraduates. Impact on other units: No direct impact. Students from other units may find the course of interest. Financial impact: None.

GEOG 444 The Age of Migration (3) Global overview of international migration trends, theories of migration, and national and local case studies.

Rationale: Will provide students with "background, tools, and experience needed to effectively obtain and analyze date on population, population issues, legal and illegal migration," as stipulated by the Livingston Professorship Endowment for the Department of Geography. Course will be included in the newly created Space, Society and Culture concentration, a connections package, and Global Challenges. Course does not compete with ANTH 325, Migration and Transnationalism, as this course takes a global, national and local perspective on migration issues, grounding migration issues in contemporary geography theories. Impact on other units: No direct impact. Financial impact: None.

GEOG 446 The Livable City (3) Theory and practice of urban livability. History and scope of the livable-city movement. Writing-emphasis course

Rationale: This course deepens our new urban concentration. Impact on other units: No direct impact. Financial impact: None.

GEOG 453 Extreme Weather Climatology (3) Spatial patterns and temporal trends of extreme weather events. Observing, forecasting, and modeling events and their impacts.
Recommended Background: Introductory physical geography or course work in climatology, meteorology, or atmospheric science.

Rationale: This course, developed by a new faculty member, will support the proposed Climate and Climate Change concentration in the Geography major. Impact on other units: No direct impact. Financial impact: None.

GEOG 462 Geographies of Race and Racism (3) Analyzes and explores the origins, development and diffusion of the concept of race, and the social, cultural and geographical manifestations of race and racism in different regions and at different historical periods.

Rationale: Draws on the experience and expertise of a new faculty member who has taught courses that comparatively look at constructions of race and ethnicity in the US and Latin America. Course should contribute well to the human geography curriculum and the other research interests and expertise of other Geography faculty. Impact on other units: None. Financial impact: None.

DROP

GEOG 421 Geography of Folk Societies (3)

GEOG 530 Pollen and Other Microfossils in Quaternary Research (3)

Rationale: Courses no longer being taught due to staffing and/or curriculum changes. Impact on other units: N/A. Financial impact: N/A

REVISE TITLE

GEOG 411 Intermediate Geographic Information Science (3)

Formerly: Introduction to Geographic Information Science (3)

REVISE TITLE AND DROP (RE)PREREQUISITE

GEOG 413 Remote Sensing of the Environment (4)

Formerly: Introductory Remote Sensing of Environment
(RE) Prerequisite(s): 132.

REVISE TITLE

GEOG 414 Spatial Data Management for Socioeconomic and Environmental Applications (3)

Formerly: Spatial Databases and Data Management (3)

GEOG 432 Environmental History from Tree Rings (4)

Formerly: Dendrochronology (4)

REVISE TITLE AND DESCRIPTION

GEOG 441 Cities as Economic Engines (3) Examination of the importance of cities in the global economy and the forces that drive this. Exploration of how city economic growth and decline. Writing-emphasis course.

Formerly: Urban Geography of the United States (3) Concepts and theories concerning development and significance of systems of cities and internal morphology of cities in the United States. Writing-emphasis course.

Rationale: In the department's recent program review the outside review team identified a number of ways we needed to update the curriculum. One suggestion was to update current course titles and, in some cases, course descriptions to better reflect contemporary geographic scholarship and the instructional strengths of the faculty. These revisions are addressing that suggestion. Impact on other units: None. Financial impact: None.

REVISE REPEATABILITY

GEOG 501 Colloquium in Geography (1)
Repeatability: May be repeated. Maximum 20 hours.

Formerly: May be repeated. Maximum 10 hours.

Rationale: Returning graduate students for the doctoral program cannot sign up for this course due to reaching the current repeatability limit so the limit needs to be increased. Impact on other units: None. Financial impact: None.

INTERDISCIPLINARY PROGRAMS

(COLI) Comparative Literature

DROP COMPARATIVE LITERATURE (COLI) ACADEMIC DISCIPLINE AND ALL COURSES

COLI 401 Special Topics in Comparative Literature (3)

COLI 402 Special Topics in Comparative Literature (3)

†COLI 452 Modern Drama (3)
(Cross-listed: See English 452.)

†COLI 454 Twentieth-Century International Novel (3) [Graduate Catalog also]
(Cross-listed: See English 454.)

COLI 510 Special Topics (3)

Rationale: This program has been inactive and has had no students for some time. The program is now being dropped. Impact on other units: None. Financial impact: None.

DEPARTMENT OF MATHEMATICS

(MATH) Mathematics

ADD

MATH 597 Graduate Student Seminar in Mathematical Research (1)
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 12 hours.
Credit Restriction: May not be applied towards Mathematics major for Master of Science degree.

Rationale: The seminar addition will provide Math graduate students the opportunity to present research they are currently working on to their peers for discussion and critique. This will also provide students the opportunity to "practice" in front of a group prior to a conference, workshop, or job interview presentation. Impact on other units: None. Financial impact: None.

MATH 629 Seminar in Stochastics (1-3)
Repeatability: May be repeated. Maximum 12 hours.
Registration Restriction(s): Minimum student level – graduate.

MATH 639 Seminar in Differential Equations (1-3)
Repeatability: May be repeated. Maximum 12 hours.
Registration Restriction(s): Minimum student level – graduate.

MATH 689 Seminar in Mathematical Ecology (1-3)
Repeatability: May be repeated. Maximum 12 hours.
Registration Restriction(s): Minimum student level – graduate.

Rationale: in the Math PhD program, students are required to complete for credit 2 research seminars. Of the seven major research areas, stochastics, Differential Equations, and Mathematical Ecology do not have official seminars listed at the 600 level. Impact on other units: None. Financial impact: None.

DEPARTMENT OF MICROBIOLOGY

(MICR) Microbiology

REVISE DESCRIPTION AND (RE)PREREQUISITES; AND ADD RECOMMENDED BACKGROUND

MICR 411 Microbial Genetics (3) Mechanisms of gene regulation as well as genetic and phenotypic variation in prokaryotic and eukaryotic microorganisms.
(RE) Prerequisite(s): Biology 220 and 240.
Recommended Background: Microbiology 321.

Formerly: Mechanisms of gene transfer, gene regulation, and genetic analysis in bacteria and single-celled fungi (yeasts).
(RE) Prerequisite(s): Biology 240.

REVISE TO ADD (RE)PREREQUISITES AND RECOMMENDED BACKGROUND

MICR 440 Virology (3)
(RE) Prerequisite(s): Biology 220 and 240.
Recommended Background: Microbiology 321 and 330.

Formerly: No (RE) Prerequisite, no recommended background.

Rationale: These changes are being made to align prereqs and recommended background with change to the major and concentration requirements. Impact on other units: None. Financial impact: None.

REVISE HOURS

MICR 515 First Year Graduate Research Colloquium (1)

(Formerly: 3)

Rationale: The original proposer accidentally listed the course credit hours as 3 as opposed to 1. This proposal seeks to correct that mistake. Impact on other units: None. Financial impact: None.

DEPARTMENT OF MODERN FOREIGN LANGUAGES AND LITERATURES

(FREN) French

REVISE (RE)PREREQUISITE

FREN 422 Advanced Grammar (3)
(RE) Prerequisite(s): 334 and 353.

Formerly: 333

Rationale: The current prerequisite allows students to register for this class with only minimal preparation. Impact on other units: None. Financial impact: None.

(JAPA) Japanese

REVISE TITLES

JAPA 451 Readings in Pre-Modern Japanese Texts (3)

Formerly: Readings in Pre-Modern Japanese Literature

JAPA 452 Reading in Modern Japanese Texts (3)

Formerly: Reading in Modern Japanese Literature

Rationale: The new titles reflect that readings may be from literary texts, but also from business, journalistic, and other sources. Impact on other units: None. Financial impact: None.

(RUSS) Russian

DROP 400-LEVEL COURSE FROM GRADUATE CATALOG (ALSO BEING DROPPED IN UG CATALOG)

RUSS 452 – Senior Seminar (3)

Rationale: Part of an ongoing revision of the Russian Studies curriculum. Impact on other units: None. Financial impact: None.

(SPAN) Spanish

REVISE (RE)PREREQUISITE

SPAN 422 Advanced Grammar and Translation (3)
(RE) Prerequisite(s): 323 and three additional Spanish courses above 323.

(Formerly: 323.)

Rationale: Students who have less than a minimum of 12 credit hours of upper-division Spanish are not prepared to be successful in an advanced grammar class that emphasizes the more subtle aspects of the language such as tone, irony, nuanced meanings across regions in the Hispanic world. Impact on other units: None. Financial impact: None.

SCHOOL OF MUSIC

(MUIN) Music Instrumental

ADD

MUIN 540 String Literature and Pedagogy I (3)
Recommended Background: Completion of minimum 200-level applied studies in strings, or by approval of instructor.

MUIN 550 String Literature and Pedagogy II (3)
Recommended Background: Completion of minimum 200-level applied studies in strings, or by approval of instructor.

Rationale: Addition of these courses will allow graduate credit for pre-existing class MUIN 340 and 350 String Literature and Pedagogy I and II. Impact on other units: None. Financial impact: None.

(MUPF) Music Performance

REVISE (RE)PREREQUISITE AND COMMENT

MUPF 494 Composition (1-3)
(RE) Prerequisite(s): 395.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 395.

Formerly: (RE) Prerequisite(s): 394.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 394.

MUPF 495 Composition (1-3)
(RE) Prerequisite(s): 494.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 494.

Formerly: (RE) Prerequisite(s): 395.
Comment(s): Requires audition, registration for ensemble appropriate to degree program, and C or higher in 395.

Rationale: Prerequisite and comment on these courses had the wrong course listed. Impact on other units: None. Financial impact: None.

(MUTC) Music Technology

ADD

MUTC 520 Scoring for Film and Media (3) Development of basic musical and technological skills required to compose music for use with visual media. Projects may include a theme for a television program, an introductory theme for a film, music for a pre-existing action scene, music for a pre-existing commercial, and music for a short film or animation. Also includes an overview of masterpieces of media scoring.
Registration Permission: Consent of instructor.

Rationale: Course is proposed as a one semester course in which students will develop the basic musical and technological skills required to compose music for use with visual media. Impact on other units: None. Financial impact: None.

MUTC 530 Virtual Audio Modeling (3) Development of the basic musical and technological skills required to create models or "mock-ups" of concert music scores via DAW (Digital Audio Workstation) and sample library technology. Projects will include models of students' own works as well as those of chamber and large form masterworks from the canon.
Registration Permission: Consent of instructor.

Rationale: Course is proposed as a one semester course in which students will develop the basic musical and technological skills required to create models or "mockups" of their concert music scores via DAW and sample library technology. Impact on other units: None. Financial impact: None.

DEPARTMENT OF PHYSICS AND ASTRONOMY

(PHYS) Physics

ADD

PHYS 556 A Survey of Modern Nuclear Physics Topics (3) Covers essential problems in nuclear physics with emphasis on topics from high, medium and low-energy nuclear physics. Models of the nucleon and nuclei will be surveyed and contemporary experimental methods will be presented in the context of applications and other areas of physics.

Rationale: Currently the department only offers nuclear physics courses at the 600-level. Nuclear physics is a strong research area in our department. This course will introduce students to the different research areas in nuclear physics at an earlier stage. Impact on other units: None. Financial impact: None.

DROP

PHYS 511 Theoretical Physics I (3)

PHYS 512 Theoretical Physics II (3)

Rationale: These courses have not been taught at UTK for over 5 years. They have been replaced with 513 and 514. Impact on other units: None. Financial impact: None.

REVISE TO DROP (RE)PREREQUISITES AND ADD BACK AS (DE)PREREQUISITES

PHYS 551 Statistical Mechanics (3)
(DE) Prerequisite(s): 521, 531, and 571.

Formerly: (RE) Prerequisite(s): 521, 531, and 571.

Rationale: Correcting a course formatting error. All of our graduate courses have department enforced prerequisites. Graduate students that have an MS from another institution are assessed individually by the department. Impact on other units: None. Financial impact: None.

REVISE DESCRIPTION

PHYS 555 Solid State Physics (3) Elementary solid state physics. Bonding in solids, free-electron-gas theory of metals, crystal structures, reciprocal lattice, energy bands, phonons, semiconductors and semiconductor devices, optical properties of solids, phenomenological description of superconductivity, magnetism, and other forms of broken symmetry.

Formerly: Elementary solid state physics. Crystal structures, reciprocal lattice, bonding in solids, energy bands, semiconductors, phonons, free-electron-gas theory of metals, superconductivity, magnetism, and other forms of broken symmetry.

Rationale: The new course description better enumerates the topics that are covered in a modern introductory solid state physics course. Impact on other units: None. Financial impact: None.

REVISE DESCRIPTION AND COMMENTS; ADD (DE)PREREQUISITE

PHYS 671 Advanced Solid State Physics (3) Second quantization. Models of fermion and boson systems. Interacting electrons at the mean field level: Hartree-Fock and density functional theory. Linear response theory (I): Thomas-Fermi and Lindhard models, Friedel oscillations. Semi-classical theory of transport, transport in quantum/topological systems, electron-phonon interactions, charge density waves, Kohn anomalies, BCS theory of superconductivity.
(DE) Prerequisite(s): 555.
Comment(s): Intended for graduate students seeking a more advanced exposure to the principles of Solid State Physics.

Formerly: Survey of research problems and methods. Topics of current interest.
Comment(s): Intended for students specializing in the field.

PHYS 672 Advanced Solid State Physics (3) Magnetism: microscopic mechanism, spin-wave theory, magnons. Strongly correlated systems: Hubbard model, Mott insulators, charge transfer insulators, many-body methods including Green's functions. Spectral functions. Linear response theory (II). Impurities: Kondo problem, periodic Anderson model, High-Tc superconductivity.
(DE) Prerequisite(s): 671.
Comment(s): Intended for graduate students seeking a more advance exposure to the principles of Solid State Physics.

Formerly: Advanced problems.
Comment(s): Intended for students specializing in the field.

Rationale: New descriptions enumerate topics of current interest that will be covered. 672 is the second part of the fundamental sequence, 671 and 672, to be offered to students seeking to acquire necessary knowledge for performing research in Condensed Matter Physics and/or Surface Science. Impact on other units: None. Financial impact: None.

DEPARTMENT OF PSYCHOLOGY

(PSYC) Psychology

ADD

PSYC 699 Pre-doctoral Internship in Clinical or Counseling Psychology (0 hours) Supervised employment in program approved psychology internship sites.
Grading Restriction(s): Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 9 times. Course to be taken in fall, spring and summer of internship year, but may be taken a second or third year if needed and with Department approval.
Registration Restriction(s): Minimum student level – graduate.
Registration Permission: Permission of Department required.

Rationale: Course will formally recognize completion of the one-year external internship that has been required for decades by the Clinical and Counseling Doctoral programs in Psychology. Currently students do not receive recognition on their transcripts for having completed this requirement, which may pose problems when seeking post-doctoral positions and licensure. We also propose this course to formally evaluate student performance during the internship year. Impact on other units: None. Financial impact: None.

DROP

PSYC 505 Research Design (3)

REVISE TITLE, DESCRIPTION; DELETE COMMENT; ADD REGISTRATION PERMISSION

PSYC 580 Research Design (3) Developing questions, hypotheses, and research designs for empirical investigation in psychology.
Registration Permission: Consent of instructor.

Formerly: Research Questions and Designs (3) Question-asking process in research and strategies or designs through which answers might be derived.
Comment(s): Admission to clinical psychology concentration or consent of instructor required.

Rationale: 505 and 580 are being consolidated. Up to now 505 has served students in the Experimental Psychology concentration and 580 has served Clinical and Counseling concentrations. The revised 580 will serve all three. Impact on other units: None. Financial impact: None.

DEPARTMENT OF SOCIOLOGY

(SOCI) Sociology

ADD 400-LEVEL COURSE FOR GRADUATE CREDIT

SOCI 454 Restorative Justice (3) Explores the restorative justice perspective on crime, harm and conflict and its global practices, which recognize reparation, reconciliation, and social justice.

Rationale: Course is being added to better recognize core faculty research and teaching strengths and promote more unity and coherence within the major concentration course options. Impact on other units: None. Financial impact: None.

ADD

SOCI 656 Contemporary Critical Criminologies (3) Explores current theories of crime and justice from critical perspectives.
Registration Restriction(s): Minimum student level – graduate.

SOCI 657 Alternative Visions of Justice (3) Explores the pluralization of alternative forms of justice across time and space, including rights discourse, social justice movements, and their relationship to various forms of justice (criminal, racial, economic, environmental, etc.)
Registration Restriction(s): Minimum student level – graduate.

Rationale: These courses have been offered regularly as topics courses in the graduate curriculum. We would like to make them permanent course offerings in order to better recognize faculty teaching contributions and facilitate graduate training in our established areas of research. Impact on other units: None. Financial impact: None.

DROP 400-LEVEL COURSE FROM GRADUATE CATALOG (ALSO BEING DROPPED FROM UG CATALOG)

SOCI 451 Criminal Justice (3)

Rationale: Course is being dropped in order to facilitate a course number change that will promote more unity and coherence within the major concentration requirements. Its corresponding partner course, SOCI 350 Criminology, is offered at the 300-level. Criminal Justice will become SOCI 351, offering more opportunities for students to access the course and a stronger relationship to our parallel criminology offering. Impact on other units: None. Financial impact: None.

DEPARTMENT OF THEATRE

(THEA) Theatre

REVISE TO DROP (RE)PREREQUISITE

THEA 446 Costume Patterning (3)

Formerly: (RE) Prerequisite(s): 345.

Rationale: 345, costume construction, is not offered often enough to consistently allow students to take it prior to 446. The instructor will modify the course content to allow for the deficiencies in students who have not taken 345. Impact on other units: None. Financial impact: None.

REVISE HOURS

THEA 545 Millinery for the Stage (3)

Formerly: 2

Rationale: Currently being taught with 3 hours and content. Impact on other units: None. Financial impact: None.

PART II. PROGRAM CHANGES

DEPARTMENT OF ANTHROPOLOGY

REVISE REQUIREMENTS – ANTHROPOLOGY MAJOR, PHD

In the 2015-16 Graduate Catalog, delete the 5th bullet with reference to foreign language comprehension:

Formerly: Demonstrate reading comprehension in one foreign language by either successful performance on a language examination administered by the appropriate language department, or completion of the second semester of specialized reading courses for graduate students with a grade of B or better."

Rationale: Department voted to drop requirement for the foreign language competency for all PhD students, preferring to leave it to the discretion of PhD chairs and committee members to require individual students to pursue a foreign language if their research requires it. Faculty members believe that for some students language mastery is best served by a more individualized course structure and a higher level of competency than the former blanket requirement achieved, while for many students, mastery of one or more other competencies (GIS, advanced statistics for example) is more useful to their research. Impact on other units: None. Financial impact: None.

DEPARTMENT OF EARTH AND PLANETARY SCIENCES

REVISE ADMISSION REQUIREMENTS – GEOLOGY MAJOR, MS AND PHD

In the 2015-16 Graduate Catalog, under Admission heading, revise 2nd paragraph as follows:

Prerequisite for either graduate degree is a bachelor's degree in the geosciences or other field (typically, but not exclusively, from the physical, natural, or life sciences or engineering). Upon admission, each student selects a major advisor before entering the Department. Once a student is in residence and begins to develop research plans, the student and advisor discuss the best possible individuals to form a committee that will be suited for advising the student. The Thesis/Dissertation Committee is primarily responsible for advising the student's research activities, but also can modify the course curriculum based on the student's area of research.

Formerly: Prerequisite for either graduate degree is a bachelor's degree in the geosciences or other field, typically, but not exclusively, from the physical, natural, or life sciences or engineering. Upon admission, each student is assigned an Advising Committee of three faculty members, which forms the initial point of contact for the student and which designs a curriculum of required course work for the student. After a student's research proposal is accepted, the Advising Committee is dissolved and a Thesis/Dissertation Committee is formed. The Thesis/Dissertation Committee is primarily responsible for advising the student's research activities, but also can modify the course curriculum based on the student's area of research.

Rationale: The current text is a hybrid between decade-old departmental admission procedures and current faculty approved departmental admission procedures. The proposed change brings the graduate catalog up-to-date. Impact on other units: None. Financial impact: None.

DEPARTMENT OF MODERN FOREIGN LANGUAGES AND LITERATURES

REVISE REQUIREMENTS – MODERN FOREIGN LANGUAGES MAJOR, PHD (SECOND CONCENTRATION, LATIN AMERICAN STUDIES)

In the 2015-16 Graduate Catalog, under heading, "Second concentration in Latin American Studies" revise 2nd and 3rd bullets by deleting current text and replacing with the following:

A graduate course (3 credit hours) with Latin American content offered by a unit outside of MFLL (preferably History). This course must be approved by the student's graduate advisor.

Formerly: History 475 (Studies in Latin American History) (3 credit hours)

Rationale: History 475 is not offered for graduate credit. This change will also give flexibility to the PhD students to take graduate courses in History (if courses with Latin American Content are offered), or in Anthropology, Political Science, Sociology, etc., in order to fulfill their second concentration requirement in LACS.

3rd bullet – revise as follows:

Three additional graduate courses in at least 2 disciplines outside of the student's primary concentration. (e.g., Anthropology, Cinema Studies, French, History, Political Science, Portuguese, Sociology, Spanish). These courses must be approved by the student's graduate advisor, and at least one of these three courses (a minimum of three graduate credit hours) must be taken at the 500-level. Consult with the Chair of Latin American Studies for course selection.

Rationale: Adding Anthropology because that department offers courses with Latin American content that can fulfill this requirement, and deleting "and approval" as these courses must be approved by the student's graduate advisor in the MFLL Department. The chair of LACS is often a faculty member from an academic unit other than MFLL and would not be able to approve courses for the MFLL graduate students. Impact on other units: None. Financial impact: None.

SCHOOL OF MUSIC

Informational Item: The School of Music will revise their website to indicate four hours of MUEN 540 is required instead of the current two hours for the Master of Music degree (performance concentration). This will increase the total hours from 33 to 35.

DEPARTMENT OF PHYSICS AND ASTRONOMY

REVISE REQUIREMENTS, PHYSICS MAJOR, MS (THESIS OPTION)

In the 2015-16 Graduate Catalog, under Thesis option, revise paragraph by deleting PHYS 511 and PHYS 512 from the list of course options.

REVISE REQUIREMENTS, PHYSICS MAJOR, MS (PROJECT OPTION)

In the 2015-16 Graduate Catalog, under Project option, revise first paragraph by deleting current text and replace as follows:

The course requirements include a minimum of 30 hours of graduate credit in courses composed of PHYS 513-PHYS 514; 9 hours from PHYS 411-PHYS 412, PHYS 421, PHYS 431-PHYS 432, PHYS 461, PHYS 507, PHYS 508, PHYS 521-PHYS 522, PHYS 531, PHYS 541, PHYS 555, PHYS 571, PHYS 573 (at least 6 hours above the 500-level); 6 hours from PHYS 593, PHYS 594 for a Project in Lieu of Thesis; and 6 additional hours which may come from physics or from a single minor field outside of the Physics Department, such as computer science, mathematics, engineering, chemistry, biology, education, business, or law.

Formerly: The course requirements include a minimum of 30 hours of graduate credit in courses composed of PHYS 506, PHYS 511-PHYS 512; 6 hours from PHYS 593, PHYS 594 for a Project in Lieu of Thesis; 9 hours from PHYS 411-PHYS 412, PHYS 421, PHYS 431-PHYS 432, PHYS 461, PHYS 507, PHYS 508, PHYS 521-PHYS 522, PHYS 531, PHYS 541, PHYS 555, PHYS 571, PHYS 573 (at least 3 hours above the 500-level); and 6 hours from a single minor field outside of the Physics Department, such as computer science, mathematics, engineering, chemistry, biology, education, business, or law.

REVISE REQUIREMENTS, PHYSICS MAJOR, MS (NON-THESIS OPTION)

In the 2015-16 Graduate Catalog, under Non-thesis option, revise current paragraph as follows:

Students seeking the non-thesis option must apply to the Director of the Graduate program for permission to enroll under this program. The requirements are the satisfactory completion of 30 hours of course work composed of 18 hours from PHYS 506, PHYS 513-PHYS 514, PHYS 521-PHYS 522, PHYS 531, PHYS 541, PHYS 571, PHYS 573; 6 additional hours from physics or a minor field; and 6 hours from other courses numbered above 400 (preferably of advanced laboratory nature.) At least 20 hours must be taken at the 500-level or above. In addition, the candidate must pass a written examination administered by his/her committee.

Formerly: Students seeking the non-thesis option must apply to the department's graduate committee for permission to enroll under this program. The requirements are the satisfactory completion of 30 hours of course work composed of 18 hours from PHYS 506, PHYS 511-PHYS 512 or PHYS 513-PHYS 514, PHYS 521-PHYS 522, PHYS 531, PHYS 541, PHYS 571, PHYS 573; 6 hours in a minor field; and 6 hours from other courses numbered above 400 (preferably of advanced laboratory nature.) At least 20 hours must be taken at the 500-level or above. In addition, the candidate must pass a written examination administered by his/her committee.

Rationale: These revisions are for catalog cleanup to eliminate courses that are no longer taught from the lists of required or recommended courses. Impact on other units: None. Financial impact: None.

REVISE REQUIREMENTS, PHYSICS MAJOR, PHD

In the 2015-16 Graduate Catalog, revise first paragraph by deleting current text and replacing with the following:

All students are expected to take the graduate core curriculum in physics consisting of PHYS 521-PHYS 522 (Quantum Mechanics), PHYS 531 (Classical Mechanics), PHYS 541 (Electromagnetism), PHYS 551 (Statistical Mechanics), and PHYS 571 (Mathematical Methods). Students concentrating in chemical physics may substitute CHEM 572 for PHYS 551 and should complete at least 6 hours from CHEM 530, CHEM 570, CHEM 571, CHEM 573, CHEM 595, CHEM 630, CHEM 670, and CHEM 690. Students concentrating in energy science and engineering should complete ESE 511, ESE 512 (Introduction to Energy Science and Technology (3 + 3 credits), at least 3 hours from the Knowledge Breadth Curriculum (a list of courses is available from the Graduate Program Director) and 3 credit hours (1+1+1) of topical seminars in the focus area of CIRE. Students must take either i) a minimum of 15 hours of 600-level courses with 6 of these hours in their concentration area, or ii) a minimum of 12 hours of 600-level courses with 6 of these hours in their concentration area and a minimum of 3 hours of 500-level courses described in a list available from the Director of the Graduate Program and approved by the student's Doctoral Committee. Among the 600-level courses, PHYS 601-PHYS 602 are normally required of students concentrating in atomic physics; PHYS 621-PHYS 622 of students in nuclear physics; PHYS 626-PHYS 627 of students in elementary particle physics (and/or PHYS 611-PHYS 612 for students concentrating in theoretical elementary particle physics); PHYS 615-PHYS 616 of students in astrophysics and cosmology; and PHYS 671-PHYS 672 of students in condensed matter and surface physics.

Formerly: All students are expected to take the graduate core curriculum in physics consisting of PHYS 521-PHYS 522, PHYS 531, PHYS 541, PHYS 551, and PHYS 571. Students concentrating in chemical physics may substitute CHEM 572 for PHYS 551 and should complete at least 6 hours from CHEM 530, CHEM 570, CHEM 571, CHEM 573, CHEM 595, CHEM 630, CHEM 670, and CHEM 690. Students concentrating in energy science and engineering should complete ESE 511, ESE 512 (Introduction to Energy Science and Technology (3 + 3 credits), at least 3 hours from the Knowledge Breadth Curriculum (a list of courses is available from the Graduate Program Director) and 3 credit hours (1+1+1) of topical seminars in the focus area of CIRE. Students must take a minimum of 15 hours of 600-level courses with 6 of these hours in their concentration area. PHYS 601-PHYS 602 are normally required of students concentrating in atomic physics; PHYS 621-PHYS 622 of students in nuclear physics; PHYS 626-PHYS 627 of students in elementary particle physics (and/or PHYS 611-PHYS 612 for students concentrating in theoretical elementary particle physics); PHYS 615-PHYS 616 of students in astrophysics and cosmology; and PHYS 671-PHYS 672 of students in condensed matter and surface physics.

Rationale: Currently the department requires 15 hours of 600-level courses. This change lets students substitute a 3-hour 500-level course approved by the student's committee for one 3-hour 600-level course. Some concentrations require students to take specialty courses that are only offered as 500-level courses. Impact on other units: None. Financial impact: None.

DEPARTMENT OF PSYCHOLOGY

REVISE REQUIREMENTS, PSYCHOLOGY MAJOR, PHD (CLINICAL PSYCHOLOGY CONCENTRATION)

In the 2015-16 Graduate Catalog, under the Requirements heading, delete all current text and replace with the following:

Requirements
Clinical Program students should complete a thesis or pre-dissertation research project by the end of the second year. After forming the doctoral committee, each student must pass a comprehensive examination administered and evaluated by the committee. The comprehensive examination is organized around a research case study of one client who has been assessed and/or treated by the student in the Departmental Psychological Clinic. In addition to the case presentation, the paper presents the student's comprehensive review of relevant research and theory as a context for procedure, results, and discussion of the case. All doctoral students must complete a minimum of 48 hours of graduate-level courses (24 if entering with a Master's Degree), including all courses required by the Clinical Program, and at least 24 hours of dissertation research (Psychology PSYC 600). Finally, students must complete an acceptable doctoral dissertation and conduct a satisfactory oral defense of the dissertation.

Requirements are as follows.
• A written thesis or pre-dissertation research project (completed before forming a doctoral supervisory committee) reported in a form acceptable to the major professor and at least one other clinical faculty member (and approved by the Clinical Faculty for the pre-dissertation project).

• A supervised clinical placement two days (16 hours) each week during the second year and the following option during the third and fourth years – continued two day clinical placement in the third and fourth years in the community or teaching assistantship in the department in either the third or fourth year, and two-day clinical placement in the other year.

• Satisfactory completion of listed courses (or equivalents) in the following categories.

1. Behavioral Neuroscience (PSYCH 527)
2. Developmental Psychology (PSYC 511) or Life Span Development (PSYCH 512)
3. Research Practicum (PSYC 509)
4. Colloquium in Psychology (PSYCH 515)
5. Cognitive and Affective Bases of Behavior (PSYC 570)
6. Developmental Psychopathology (PSYC 597)
7. History and Systems of Psychology (PSYC 565)
8. Multicultural Psychology (PSYC 577)
9. Seminar in Applied Psychometrics (PSYC 607)
10. Advanced Professional Issues in Clinical Psychology (PSYC 645)
11. Research Design (PSYC 580)
12. Psychological Assessment I and II (PSYC 594- PSYC 595) and Laboratory (PSYC 596)
13. Analysis of Variance for Social Sciences (PSYC 521) & Multiple Regression for Social Sciences (PSYC 522) (or approved courses from Stats Department)
14. Social Psychology (PSYC 550)
15. Field Placement in Clinical Psychology (PSYC 695)
16. Clinical Psychopathology (PSYC 599)
17. Ethical Issues in Professional Psychology (PSYC 598)
18. Psychotherapy I and II (PSYC 670-PSYC 671) and Laboratory (PSYC 673)
19. Doctoral Research and Dissertation (PSYC 600), 24 hours.

• Students who choose a teaching assistantship in the third or fourth year must have satisfactorily completed PSYC 528.
• Satisfactory completion of a one-year clinical internship at a site approved by the program.

Rationale: These proposed changes are requested so that they are consistent with the current curriculum requirements of the Doctoral Program in Clinical Psychology. Impact on other units: None. Financial impact: None.

REVISE REQUIREMENTS, PSYCHOLOGY MAJOR, PHD (COUNSELING PSYCHOLOGY CONCENTRATION)

In the 2015-16 Graduate Catalog, under the Requirements heading, delete all current text and replace with the following:

The counseling psychology program is based upon the scientist-practitioner-advocate model of training which stresses an integration of scholarly research, counseling psychology practice, and social justice advocacy. Students are trained to work with people with: (a) a focus on working within a developmental framework across the whole range of psychological functioning; (b) a focus on assets and strengths; (c) an emphasis on brief counseling/therapy approaches; (d) an emphasis on person-environment interactions, rather than an exclusive focus on either person or environment; (e) an emphasis on prevention; (f) an emphasis on the educational and vocational lives of individuals; (g) attention to issues of and respect for individual and cultural diversity; and (h) evaluation and improvement through critical thinking and a commitment to the scientific approach. Students are eligible to concurrently earn a Master's degree in Psychology with a thesis in route to earning the doctoral degree.

Requirements
The counseling psychology program consists of a minimum of 110 semester hours (SH) of graduate credit. This includes a minimum of 80 SH of course work, 6 SH of thesis research, and 24 SH of dissertation research (see below).

Students are assigned a temporary faculty advisor upon admission to the program. By the end of their first calendar year, students are expected to have selected a Master's committee. The function of this committee is to advise and approve students' curriculum plan and Master's thesis. Students then form their doctoral committee. The doctoral committee approves the students' dissertation proposal and verifies that the dissertation is acceptable for the doctoral degree. Both the Master's thesis and doctoral dissertation are original research that is theoretically based and psychological in nature. They must fulfill the requirements and procedures as stated in the current University of Tennessee, Knoxville, *Graduate Catalog*.

The counseling psychology faculty that comprise the doctoral committee also advise and approve students' comprehensive portfolio. The portfolio covers various artifacts of the counseling psychology core. Students prepare and present both a written portfolio and hold an oral defense.

The following are required of all students. Students are required conduct supervised counseling practica and field placements in the community. These experiences must result in a minimum of 500 hours of Intervention and Assessment Experience, of which at least 300 hours must be in the category of Individual or Group Counseling. In addition, 100 hours of Supervision Received must be accumulated.

Satisfactory completion of the following curriculum.

A. Counseling Psychology Core (minimum 50 SH)
1. Professional Orientation (8 SH)
2. Multicultural Competencies and Human Diversity (6 SH)
3. Social Justice Advocacy and Interventions (6 SH)
4. Vocational Psychology (3 SH)
5. Psychological Assessment (9 SH)
6. Practicum Supporting Coursework (9 SH)
7. Counseling Psychology Interventions (minimum 18 SH)

B. Research Core (12 SH)
1. Research Design (3 SH)
2. Quantitative Methods (6 SH)
3. Qualitative Methods (3 SH)

C. General Psychological Foundations (15 SH)
1. History of Systems of Psychology (3 SH)
2. Biological Bases of Behavior (3 SH)
3. Cognitive-Affective Bases of Behavior (3 SH)
4. Social Bases of Behavior (3 SH)
5. Developmental Bases of Behavior (3 SH)

D. Capstone Elective (3 SH)

E. Master's Thesis (6 SH)

F. Doctoral Dissertation (24 SH)

Students are also required to complete a 2000-hour internship prior to graduation. In consultation with the student and the student's doctoral committee chair, the training director approves the internship site, which must meet American Psychological Association
Guidelines.

Students who wish to have experience as teaching assistants must first satisfactorily complete department's teaching practicum course.

Rationale: The counseling psychology doctoral program has revised program description and requirements so this catalog change is needed to reflect the current program. Impact on other units: None. Financial impact: None.

REVISE REQUIREMENTS, PSYCHOLOGY MAJOR, PHD (EXPERIMENTAL PSYCHOLOGY CONCENTRATION)

In the 2015-16 Graduate Catalog, under the Requirements heading, revise second bullet to:

3 hours of Research Design PSYC 580 or equivalent

Formerly: 3 hours of Research Design PSYC 505 or equivalent

Rationale: 505 – Research Design has been dropped and the content of that course has been moved to 580, which has been renamed as Research Design. Impact on other units: None. Financial impact: None.

HASLAM COLLEGE OF BUSINESS

All changes effective Fall 2016

I. COURSE CHANGES

(BUAD) Business Administration

ADD

BUAD 540 Academic Writing for Doctoral Students (1) Principles and practices of academic writing for publication. Students will analyze student and professional writing at the diction and syntax level while developing personal strategies for writing and revision based on target audience.

SUPPORTING INFORMATION: Rationale: The most important tool for academic success is the ability to write and publish (Patricia Goodson, Becoming an Academic Writer). Since other doctoral courses are content-driven, writing instruction is ancillary. This course provides a focused, experiential structure to help graduate students develop effective and efficient writing habits. Staffing impact: Additional faculty or GTAs will not be needed since this course is already being taught as a Management Special Topics course (MGT 593). Financial impact: None. Impact on other units: None. Course format and location: N/A.

Learning Outcomes: Did not result in this course proposal, however this proposal does support other important goals of the Haslam College of Business: This course aligns with two of the Haslam College of Business values: insight and impact. This manifests in its support of the strategic priority, thought leadership. It directly contributes to Goal #5 (to enhance the quality and visibility of doctoral programs, our PhD students, and associated scholarship by increasing doctoral program and students support, enhancing student mentoring and training, and improving placements). Anecdotal support for the need of this class comes from both faculty and students.

REVISE COMMENTS

BUAD 552 Executive Core II (1-12)
Comment(s): Executive MBA admission required or by permission of instructor. Load of less than 12 hours available only by prearrangement with supervising faculty member. Consent of program director required for course enrollment of less than 12 hours.

Formerly: Comment(s): Executive MBA admission required. Load of less than 12 hours available only by prearrangement with supervising faculty member. Consent of program director required for course enrollment of less than 12 hours.

BUAD 553 Executive Core III (1-12)
Comment(s): Executive MBA admission required or by permission of instructor. Load of less than 12 hours available only by prearrangement with supervising faculty member. Consent of program director required for course enrollment of less than 12 hours.

Formerly: Comment(s): Executive MBA admission required. Load of less than 12 hours available only by prearrangement with supervising faculty member. Consent of program director required for course enrollment of less than 12 hours.

REVISE TO ADD COMMENTS

BUAD 562 Management Project II (3)
Comments: Or by permission of instructor.

BUAD 563 Management Project III (3)
Comments: Or by permission of instructor.

Rationale: To increase flexibility in the start date for students pursing an MBA degree, as well as to allow transfer students who wish to complete and MBA degree the opportunity to do so. Staffing Impact: None. Financial Impact: None. Impact on Other Units: None.

DEPARTMENT OF ACCOUNTING AND INFORMATION MANAGEMENT

(ACCT) Accounting

REVISE HOURS

ACCT 593 Individual Research in Accounting (1-3)

Formerly: 3

Rationale: Due to some states requiring 3 hours of business law for CPA licensure, it would benefit some MAcc students to change the hours of ACCT593 from 3 hours to 1-3 hours. With this change, the faculty would have the flexibility to allow a student (with permission of the MAcc advisor) to take one hour of ACCT593 as a Business Law topical hour (with a comment line on his/her transcript explaining that they earned an hour of business law content), and two hours as other Individual Research in Accounting. Impact on other units: None expected. Financial impact: None expected. Additional Documentation: None required.

(INMT) Information Management

REVISE DESCRIPTION

INMT 545 E-Enterprise (3) This 'hands on,' project-based course introduces students to transaction processing basics, the flow of data in businesses, business application software, and key information management trends and challenges, with a focus on Internet enabled business processes that connect buyers, suppliers, and trading partners in dynamic, real-time information sharing partnership. Students work with a variety of tools to enhance their knowledge and technology skills (e.g., power spreadsheet modeling, corporate application (ERP, CRM, SCM) software, data analytics software, etc.)

Formerly: Introduces students to transaction processing basics, the flow of data in businesses, business application software, and key information management trends and challenges. Students use corporate application software to learn more about transaction processing (ERP) systems, CRM, SCM, and BI systems used by organizations.

INMT 546 Business Application Logic and Tools (3) This 'hands-on', projects-based course introduces students to business application logic and object programming. Topics include fundamentals of business application logic, business application architectures, and project management. Students use application development tools to write Visual Basic algorithms which link to databases and other file types.

Formerly: A hands-on, project-based course introduces students to business application logic and object programming. Topics include fundamentals of business application logic, business application architectures, and applied project management. Students learn to apply advanced tools associated with spreadsheet and databases (using Visual Basic algorithms).

SUPPORTING INFORMATION: Rationale: Better reflects course content. Staffing Impact: None. Impact on Other Academic Units: None. Financial Impact: None.

DEPARTMENT OF BUSINESS ANALYTICS AND STATISTICS

(BZAN) Business Analytics

ADD

BZAN 545 Database and Big Data Technologies (3) Focuses on current technologies used to manage and implement analytics in big data environments. After a basic introduction to the Linux operating system, students will be exposed to a range of important database and data warehouse technologies and learn to interact with them using scripting languages such as python, R, and SQL. Topics will reflect currently important technologies, and may include an extensive discussion of relational and non-relational databases including graph, columnar, and document databases and data warehouse appliances. In addition, the map-reduce paradigm and distributed computing platforms such as Apache Hadoop, and Spark will be introduced. Students will also be exposed to implementations of the technology in cloud computing environments.
(RE)Prerequisite(S): 535.

SUPPORTING INFORMATION: Rationale: this addition is required to reflect the needed change in curriculum to provide for students expertise in a critical area of analytics, big data analytics. Staffing Impact: None, 1.5 hours of content will be delivered by subject matter experts from industry and BZAN 547, a 1.5 hour course will be deleted from the MSBA curriculum. Financial Impact: The subject matter experts will be paid with MSBA differential fee funds. Impact on other units: None.

Learning Outcomes Supported: LO1. Demonstrate ability to identify the necessary data to address an important business question. LO2. Demonstrate the ability to apply sound statistical analysis techniques to solve business problems, and to present these to the faculty and students.

REVISE TITLE AND DESCRIPTION

BZAN 543 Enterprise Data Management for Business Analytics (1.5) Focuses on software to manage and manipulate large data sets in preparation for analysis, using the SAS data step, PROC SQL, and the SAS macro language. Brief attention will be given to other SQL tools.

Formerly: Data Management for Business Analytics (1.5) Focuses on software to manage and manipulate data in preparation for analysis, using the SAS data step, PROC SQL, and the SAS macro language. Brief attention will be given to other SQL tools.

Supporting Information: Rationale: this revision is needed to accurately reflect updated content. Staffing Impact: none. Financial Impact: None. Impact on Other Units: None.

Learning Outcomes Supported: LO2. Demonstrate the ability to apply sound statistical analysis techniques to solve business problems, and to present these to the faculty and students.

REVISE DESCRIPTION

BZAN 544 Decision Support Systems for Business Analytics (1.5) Building integrated analytic models with graphical user interfaces to support business decision-making processes using Python and the VBA structured programming language.

Formerly: Building integrated analytic models with graphical user interfaces to support business decision-making processes using the VBA structured programming language.

SUPPORTING INFORMATION: Rationale: this revision is needed to accurately reflect updated content. Staffing Impact: None. Financial Impact: None. Impact on Other Units: None.

Learning Outcomes Supported: LO3. Students will be able to present and defend data analysis conducted to address an important business question in business language for a general manager.

(STAT) Statistics

REVISE DESCRIPTION; ADD (RE)PREREQUISITES AND REMOVE RECOMMENDED BACKGROUND

STAT 567 Survival Analysis (3) Statistical Analysis of time-to-event data with censored observations. Nonparametric methods as well as parametric regression models and the Cox proportional hazards model are explored. Case studies from both engineering and business analytics are used.
(RE) Prerequisites: Statistics 563 or Business Analytics 533, or equivalent.

Formerly: Introduction to survival analysis. Statistical analysis of time-to-event data with different types of censoring. Regression models including the Cox proportional hazards model. Time-to-failure, customer retention and other types of data depending on student interest.
Recommended Background: Calculus and a prior graduate statistics course.

Supporting Information: Rationale: this revision is needed to accurately reflect updated content. Staffing Impact: none. Financial Impact: None. Impact on Other Units: None.

Learning Outcomes Supported: LO2. Demonstrate the ability to apply sound statistical analysis techniques to solve business problems, and to present these to the faculty and students.

DEPARTMENT OF MANAGEMENT

(ENT) Entrepreneurship

ADD

ENT 510 Leadership in Nonprofits and Social Entrepreneurship (3) Organizations pursuing goals for the benefit of society face a unique set of challenges compared to those with primarily for-profit goals. Though charged with vitally important missions, nonprofits and social ventures (for-profit businesses with a social mission) are too often poorly led and managed. Develops business-minded thinking and useful leadership skills in the future leaders of organizations with societal and nonprofit missions.
Credit Restriction: students cannot receive credit for both Entrepreneurship 410 and Entrepreneurship 510.

ENT 551 New Venture Planning (3) Integration of various functional disciplines and their application to general management of new ventures formed both within larger corporations and independently. Topics include a venture plan and case analysis.
(DE) Prerequisite(s): Business Administration 513.
Comment(s): Or consent of instructor.
Registration Restriction(s): Master of Business Administration – business administration major.

ENT 552 Entrepreneurial Strategy Implementation (3) Implementation strategies of entrepreneurial organizations. Guided by a statement of work, student teams interact with the entrepreneur weekly to analyze company data, conduct research, and test pilot programs so as to recommend best practices for strategy implementation.
(DE) Prerequisite(s): Business Administration 513.
Comment(s): Or consent of instructor.
Registration Restriction(s): Master of Business Administration – business administration major.

ENT 559 New Venture Start-up (3) Faculty mentorship is provided to a student entrepreneur during the early months of venture creation. Topics include staffing, IP, alpha and beta customers, sourcing, financing, distribution and capitalization.
(DE) Prerequisite(s): 551 and 552.
Comment(s): Or consent of instructor.
Registration Restriction(s): Master of Business Administration – business administration major.

ENT 560 Monetization of Technology Enabled Social Media (3) An applied learning experience for students to gain the necessary skills to create sustainable customer value for organizations from technology-enabled social media. Students will post and comment on a private blog about insights from extensive research of such business areas as search, blogging, games, crowd sourcing, online-2-offline commerce, business software, etc. The students then apply this knowledge to an entrepreneurial company.
(RE) Prerequisite(s): Business Administration 518, or permission of instructor.

SUPPORTING INFORMATION: Rationale: These courses replace related dropped MGT courses. ENT is a new discipline and these courses fit in this academic content. Staffing Impact: None Financial Impact: None. Impact on other Units: Communication will occur with the Dual Degree MBA Programs as these courses are available as electives.

Learning Outcomes: Achievement of consistent undergraduate and graduate ENT academic content will provide a pathway for enhanced student skill development by means of expanded experiential learning, mentorship and connections.

(HRM) Human Resource Management

ADD

HRM 595 Selected Topics in Current Management Issues (3) In-depth consideration of current issues. Managerial impact of emerging topics.
Repeatability: May be repeated: Maximum 6 hours.
Registration Permission: Consent of instructor.

SUPPORTING INFORMATION: Rationale: These changes will alleviate confusion in registration and align the class title with the HRM Major and SHRM. Staffing Impact: None Financial Impact: None. Impact on other Units: None.

Learning Outcomes: This supports the goals and mission of the HRM Master's program and aligns classes with the major.

REVISE CROSS-LISTED COURSES TO ADD HUMAN RESOURCE MANAGEMENT AS PRIMARY OWNER (COMPLETELY DROPPING THE CROSS-LISTING. MANAGEMENT COURSES ARE BEING DROPPED)

HRM 521 Foundations of Human Resource Management (3)
Examination of the theoretical foundations, historical development, and contemporary practice of human resource management (HRM). Core human resource management areas are surveyed, including employment law, employee rights and employer responsibilities, job analysis, job design, measurement of individual differences, performance management, career development, training, and employee/management relationships.

Formerly: Cross-listed: (See Management 521.)

HRM 550 Organizational Behavior and Development (3)
Examination of individual group and organizational issues that affect and shape organizations. Topics include individual differences, motivation, communication, decision making, leadership, power, organizational structure and design, and change.

Formerly: Cross-listed: (See Management 550.)

SUPPORTING INFORMATION: Rationale: These changes will alleviate confusion in registration and align the class title with the HRM Major and SHRM. The Management courses are being dropped entirely. Staffing Impact: None Financial Impact: None. Impact on other Units: None
Learning Outcomes: This supports the goals and mission of the HRM Master's program and aligns classes with the major.

(MGT) Management

ADD

MGT 618 Overview of Entrepreneurial Research (3) Survey of entrepreneurship research and theory at various levels of analysis. Includes foundational work as well as sub-fields and special topics within entrepreneurship research.
Registration Restriction(s): Minimum student level – graduate.

SUPPORTING INFORMATION: Rationale: Entrepreneurship is increasing in importance in management. This course fits the direction of our department and will provide better job prospects for our students. Staffing Impact: None Financial Impact: None. Impact on other Units: None.

Learning Outcomes: Students will learn leading edge entrepreneurship theories and empirical research.

DROP

MGT 510 Leadership in Nonprofits and Social Entrepreneurship (3)

MGT 551 New Venture Planning (3)

MGT 552 Entrepreneurial Strategy (3)

MGT 559 New Venture Start-up (3)

MGT 560 Monetization of Technology Enabled Social Media (3)

MGT 616 Designing Effective Organizations (3)

SUPPORTING INFORMATION: Rationale: These courses are being replaced by related added ENT courses. ENT is a new discipline and these courses fit in this academic content. Staffing Impact: None Financial Impact: None. Impact on other Units: Communication will occur with the Dual Degree MBA Programs as these courses are available as electives.

Learning Outcomes: Achievement of consistent undergraduate and graduate ENT academic content will provide a pathway for enhanced student skill development by means of expanded experiential learning, mentorship and connections.

Equivalency Table	
Current Courses	Equivalent Courses effective Fall 2016
Management (MGT) 551	Entrepreneurship (ENT) 551
Management (MGT) 552	Entrepreneurship (ENT) 552
Management (MGT) 560	Entrepreneurship (ENT) 560
Management (MGT) 510	Entrepreneurship (ENT) 510
Management (MGT) 559	Entrepreneurship (ENT) 559
Management (MGT) 521	Human Resource Management (HRM) 521
Management (MGT) 550	Human Resource Management (HRM) 550

REVISE CROSS-LISTED COURSES TO DROP MANAGEMENT AS THE PRIMARY OWNER AND TO ENTIRELY DROP THE MANAGEMENT COURSES

MGT 521 Foundations of Human Resource Management (3)
Cross-listed: (Same as Human Resource Management 521.)

MGT 550 Organizational Behavior and Development (3)
Cross-listed: (Same as Human Resource Management 550.)

SUPPORTING INFORMATION: Rationale: These changes will alleviate confusion in registration and align the class title with the HRM major. Staffing Impact: None. Impact on other Units: None. Financial Impact: None.

REVISE TITLE AND DESCRIPTION

MGT 625 Advanced Strategy II: Organizational and Strategic Processes (3) Delves into process research in strategic management, with a primary focus on exploratory qualitative research. Topics include strategy formation process, the practice of strategy, structural changes, the role of middle and top managers in strategic changes, merger and acquisition processes, international expansion processes, and processes related to organizational decline and death.

Formerly: Advanced Strategy II (3) Examines foundational and contemporary research in the field of strategic management. Primary emphasis will be given to the major content areas of corporate strategy, strategic leadership and innovation.

SUPPORTING INFORMATION: Rationale: To better communicate topics covered in this course to prospective students Staffing Impact: None. Financial Impact: None. Impact on other Units: None.

DEPARTMENT OF MARKETING AND SUPPLY CHAIN MANAGEMENT

(SCM) Supply Chain Management

REVISE TITLE, DESCRIPTION, AND (RE)PREREQUISITES

SCM 547 Supply Chain Planning and Analysis (3) Development of plans for executing supply chain processes to support integration of the supply chain across major functional areas of the business including logistics, marketing, manufacturing, and procurement. To facilitate achievement of these objectives, the course introduces analytical tools and techniques that provide a cause and effect understanding linking operational plans with corporate objectives.
(RE) Prerequisite(s): Business Administration 518 and Supply Chain Management 505.

Formerly: SCM 547 Supply Chain Analytics and Strategy (3) Development of strategy for supply chain processes and logistics systems. Executive-level integration of supply chain strategy with functional areas including logistics, marketing, manufacturing and procurement. Introduction and use of analytical tools and techniques that provide a cause and effect understanding of operational actions to corporate objectives.
(RE) Prerequisite(s): Business Administration 518.

SUPPORTING INFORMATION Rationale: The proposed changes to SCM 547 (and the inclusion of potential substitutes for it in the SCM Concentration) are needed for two reasons that are related to the rapidly developing state of the career field. First, careers and career paths in SCM vary considerably; both positions and paths may focus on planning, procurement, manufacturing, operations, transportation, or distribution, and in many cases, encompass some combination of the above. This sequence is often abbreviated as the Plan-Source-Make-deliver sequence. However, for many individuals, regardless of the sub-field, there is significant time spent in the career within planning roles (i.e., production planner, materials planner, procurement planner, and/or demand planner). However, to date, our curriculum has focused on the last three elements of the SCM sequence – we have focused on Source, Make, and Deliver, but due to the analytical nature of the Plan function, and our program's traditions in Source and Deliver, we have failed to offer such a course. Given our recent development of capabilities in the Plan area, and added emphasis on decision analysis, we believe we can provide better service to students by revamping the current version of 547 (which has started to organically morph into a planning course anyway) into a formal planning course that focuses on these areas of study. Staffing impact: None. Financial impact: None. Impact on other units: None.

Learning Outcomes. This proposal should positively impact the rigor and relevance of the current SCM concentration by adding more planning content, consistent with the career paths of many of our students.

Evidence from Assessment Activities. Student feedback, alumni feedback, and feedback from our executive advisory board was sought prior to making this proposal, and agreement from these three sources is the key motivating factor for these changes.

PART II: PROGRAM CHANGES

DEPARTMENT OF BUSINESS ANALYTICS AND STATISTICS

REVISE REQUIREMENTS – BUSINESS ANALYTICS MAJOR, MS

In the 2016-2017 Graduate Catalog, delete the current core requirements and replace with the following:

*Core Requirements: BZAN 530, BZAN 531, BZAN 533, BZAN 535, BZAN 540, BZAN 542, BZAN 543, BZAN 544, BZAN 545, BZAN 550, and BZAN 548.

Formerly: *Core Requirements: BZAN 530, BZAN 531, BZAN 533, BZAN 535, BZAN 540, BZAN 542, BZAN 543, BZAN 544, BZAN 546, BZAN 547, BZAN 550, and BZAN 548.

SUPPORTING INFORMATION : Rationale: Students need content proposed in BZAN 545 to gain critical expertise in Big Data Analytics. Content of BZAN 546 is not required for ALL MSBA students; thus, it will become an elective. The content in BZAN 547 is not required for ALL MSBA students; thus, BZAN 547 will be deleted from the MSBA curriculum. The BZAN 547 content relevant to MSBA students will be integrated into an existing elective course, STAT 567. Staffing Impact: none -1.5 hours of content for BZAN 545 will be delivered by subject matter experts from industry, and BZAN 547, a 1.5 hour course will be deleted from the MSBA curriculum. Financial impact: The subject matter experts teaching 1.5 hours of BZAN 545 will be paid with MSBA differential fee funds. Impact on Other Units: None.

Learning Outcomes: LO1. Demonstrate ability to identify the necessary data to address an important business question. LO2. Demonstrate the ability to apply sound statistical analysis techniques to solve business problems, and to present these to the faculty and students.

REVISE REQUIREMENTS – BUSINESS ANALYTICS MAJOR, MS

In the 2016-2017 Graduate Catalog, add the following line at the bottom of the description of core requirements.

“A grade of D or below in any core course is grounds for dismissal from the Master's in Business Analytics Program."

SUPPORTING INFORMATION: Rationale: A student must earn a grade of C or better in all core courses to demonstrate a minimum acceptable level of expertise in all core academic classes in order to earn the MSBA degree. Staffing Impact: None. Financial Impact: None. Impact on Other Units: None.

Learning Outcomes: LO1. Demonstrate ability to identify the necessary data to address an important business question. LO2. Demonstrate the ability to apply sound statistical analysis techniques to solve business problems, and to present these to the faculty and students. LO3. Students will be able to present and defend data analysis conducted to address an important business question in business language for a general manager.

REVISE ADMISSION POLICY, MANAGEMENT SCIENCE MAJOR, PHD

In the 2016-2017 Graduate Catalog, delete the current information under the Admission heading and replace with the following:

In addition to any other admission requirements for the Graduate School:
Submit online graduate application to the Office of Graduate Admissions
Submit three recommendation forms
Submit a GRE or GMAT score

Applications may be submitted at any time. But we only admit every-odd numbered year for the fall term only.

Formerly: Submit online graduate application to the Office of Graduate Admissions. The doctoral program requires three recommendation forms and the GRE or GMAT, in addition to the Graduate Council's requirements.

SUPPORTING INFORMATION: Rationale: We plan to admit Ph.D. students once every two years, which will allow us to offer our core courses once every two years. This will result in more students per course than would otherwise be the case if we offered these courses every year. By doing so, we will also utilize our limited faculty resources more effectively. Staffing Impact: None. Financial Impact: None. Impact on Other Units: None.

DEPARTMENT OF ECONOMICS

REVISE REQUIREMENTS – ECONOMICS MAJOR, PHD

In the 2016-2017 Graduate Catalog, under the Requirements Heading delete current text and replace with the following:

Students entering the PhD program with only a baccalaureate degree, including those that receive a MA in economics from the University of Tennessee while in the program, must take a minimum of 72 total graduate credit hours, including a minimum of 48 graduate course credit hours and 24 hours in econ 600 Doctoral Research and Dissertation. Students entering with a master's degree will be required to take a minimum of 48 total graduate credit hours, including at least 24 hours of graduate course credit and 24 hours in econ 600 Doctoral Research and Dissertation. Specific department requirements for the PhD include the following.

Formerly: The program requires a minimum of 48 hours of coursework beyond the bachelor's degree or 24 hours beyond the master's degree, plus at least 24 hours of ECON 600 Doctoral Research and Dissertation. Specific department requirements for the PhD include the following.

SUPPORTING INFORMATION: Rationale: The current description has led to an uneven interpretation of our requirements for those who receive a (concurrent) MA in economics while enrolled in the PhD program. We do not want students who elect to do so to be subject to additional coursework requirements, i.e., there should be no penalty for reaching the MA milestone. Note that the change adheres to UT policy, which states "If the doctoral program does not require a master's degree, the candidate must complete a minimum of 48 hours of graduate course work beyond the baccalaureate degree." Our program does not require a master's degree for admissions. Staffing Impact: None. Financial Impact: None. Impact on Other Units: None.

DEPARTMENT OF MANAGEMENT

REVISE ADMISSION REQUIREMENTS – HUMAN RESOURCE MANAGEMENT MAJOR, MS

In the 2016-2017 Graduate Catalog, delete the current Admission text and replace with the following:

Students may begin graduate course work for the Master of Science with a major in human resource management in the fall semester. The online application deadline is May 1 (February 1 for international students). Online applications by U.S. citizens and permanent residents received after the May 1 application deadline will be considered as space allows.

Students with a business administration degree from an accredited baccalaureate degree program normally require no additional preparation for the program. Students with undergraduate degrees in areas other than business administration may enter the MS program but must complete course work in Business Foundations. The foundations course work includes Accounting 200; Economics 201; Management 201, and Business Administration 242, or their equivalents as approved by the director of the HRM program. All Business Foundations course work must be completed either before entering the program or within 12 calendar months of matriculation.

In addition to the general admission requirements, MS applicants are required to take the Graduate Record Exam (GRE) or the Graduate Management Admission Test (GMAT). Applicants whose native language is not English must submit results of the Test of English as a Foreign Language (TOEFL).

The GRE/GMAT admission requirement may be waived in the following instances:

1. The applicant is a University of Tennessee Haslam College of Business student or graduate in good standing with a minimum 3.0 cumulative GPA at the time of graduation.
2. The applicant has a minimum of 5 years verified Human Resource Management work experience. The HRM program director will review these requests on a case by case basis and make the final determination whether the work qualifies for an exemption.
3. The applicant currently holds one of the following professional certifications: PHR, SPHR, GPHR, SHRM-CP or SHRM-SCP.
4. The applicant has earned a master's degree from an accredited institution in the U.S.

Please note that the waiver of the GRE/GMAT is not a guarantee of admission into the HRM Master of Science degree program.

For admission to the MS program, consideration is given to:

- Applicant's academic record with particular attention to the last two years of undergraduate work.
- Scores on the GMAT or GRE (unless waived), and TOEFL for those whose native language is not English.
- Internships and/or work experience and other activities that demonstrate potential for leadership in the HRM field.
- Recommendations from professors and/or work supervisors.

The admission decision is based on all factors that make up the total application.

Formerly: "Students may begin graduate course work for the Master of Science with a major in human resource management in the fall or spring semesters. The online application deadline is May 1 (February 1 for international students). Online applications by U.S. citizens and permanent residents received after the May 1 application deadline will be considered as space allows.

Students with a business administration degree from an accredited baccalaureate degree program normally require no additional preparation for the program. Students with undergraduate degrees in areas other than business administration may enter the MS program but must complete course work in Business Foundations. The foundations course work includes Accounting 200; Economics 201; Management 201, and Business Administration 242, or their equivalents as approved by the director of the HRM program. All Business Foundations course work must be completed either before entering the program or within 12 calendar months of matriculation.

In addition to the general admission requirements, MS applicants are required to take the Graduate Record Exam (GRE) or the Graduate Management Admission Test (GMAT) and submit information on forms provide by the Management Department. Applicants whose native language is not English must submit results of the Test of English as a Foreign Language (TOEFL).

For admission to the MS program, consideration is given to:

- Applicant's academic record with particular attention to the last two years of undergraduate work.
- Scores on the GMAT or GRE, and TOEFL for those whose native language is not English.
- Internships and/or work experience and other activities that demonstrate potential for leadership in the HRM field.
- Recommendations from professors and/or work supervisors.

The admission decision is based on all factors that make up the total application; therefore, there is not an automatic cutoff for either grade point average or test scores. "

Rationale: This is a revision to the admissions process. We are waiving the GRE for an applicant if they have or will graduate from the Haslam College of Business undergraduate program with a 3.0 GPA. The exam is one predictor of success but having a degree from the Haslam College of Business is a predictor of success. We will also consider waiving the GRE for a returning HR professional if they have 5 years of experience and/or a certification in SHRM. This shows they have knowledge beyond the classroom that will make them successful. Staffing Impact: None. Impact on Other Academic Units: None. Financial Impact: None.

REVISE REQUIREMENTS – HUMAN RESOURCE MANAGEMENT MAJOR, MS

In the 2016-2017 Graduate Catalog, delete the current Requirements and replace with the following:

	Hours Credit
Human Resource Management MGT 521	3
Human Resource Management HRM 535	3
Human Resource Management HRM 540	3
Human Resource Management HRM 530	3
Human Resource Management HRM 545	3
Human Resource Management HRM 555	3
Human Resource Management HRM 595	6
Human Resource Management HRM 550	3
Statistics STAT 531 or equivalent course approved by the Program Director	3
Human Resource Management HRM 503 or HRM 592	3
	Total 33

SUPPORTING INFORMATION: Rationale: Reflects change in discipline codes for HRM 521, 550, 595. Changes will alleviate confusion in registration – previously, some students have been registering for courses under Management, some under HRM. Staffing Impact: None. Impact on Other Academic Units: None. Financial Impact: None.

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

In the 2016-2017 Graduate Catalog, delete the current minimum course requirements and replace with the following:

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

Formerly: "Minimum course requirements are MGT 616, MGT 617, MGT 623, MGT 624 and MGT 625."

SUPPORTING INFORMATION: Rationale: Management 616 is being dropped per a previously described course change proposal. The addition of MGT 618 reflects the increasing importance of entrepreneurship in management. This course fits the direction of our department and will provide better job prospects for our students. Staffing Impact: None. Impact on Other Academic Units: None. Financial Impact: None.

REVISE REQUIREMENTS – ENTREPRENEURSHIP AND INNOVATION CONCENTRATION, BUSINESS ADMINISTRATION MAJOR, MBA

In the 2016-2017 Graduate Catalog, delete the minimum course requirements and replace with the following"

"Minimum course requirements are ENT 551 and ENT 552."

Formerly: 'Minimum course requirements are MGT 551 and MGT 552."

SUPPORTING INFORMATION: Rationale: These courses are being dropped from the Management discipline and being added under the Entrepreneurship discipline. Staffing Impact: None. Impact on Other Academic Units: None. Financial Impact: None.

COLLEGE OF COMMUNICATION AND INFORMATION

All changes effective Fall 2016

I COURSE CHANGES

(INSC) INFORMATION SCIENCES

SIS Program Learning Outcomes

1. The student can describe and discuss the processes of creation, organization, distribution, storage, access, retrieval, management, use, and preservation of information in society.
2. The student can describe and discuss the nature of leadership and management in the information professions and the importance of participation in the global information society.
3. The student can apply the general principles, values, and ethical standards of providing information services in a variety of settings and for diverse populations.
4. The student can comply with the changing responsibilities of the information professional in a culturally diverse and networked global society.
5. The student can identify critical professional issues in a variety of organizational, cultural, societal, disciplinary, transdisciplinary, and historical contexts.
6. The student can analyze and apply information policies, and information-related laws that influence the delivery of information resources throughout society.
7. The student can explain the changing nature of information, information needs, and information behavior.
8. The student can assess and implement information technologies, systems, sources and services that serve users effectively and efficiently.
9. The student can analyze research in the profession.

ADD

INSC 580 Information Technologies (3) Evolution, trends, capabilities, and limitations of technologies applied to information capture, storage, preservation, access, and distribution.
Registration Restrictions(s): Minimum student level – graduate.

Rationale: We are dropping 585 and adding it back under a lower 58x number sequence. The course is the most basic Information Technology course offered in the School of Information Sciences. The fact that it has a higher number in the 58x sequence than INSC 581, a more advanced course, is confusing to students and advisors. Impact on other units: None. Financial Impact: None.

This course will support program learning outcomes 1 and 8.

EQUIVALENCY CHART

Current Course	Equivalent Course effective Fall 2016
INSC 585	INSC 580

INSC 583 Introduction to Youth Informatics (3) Introduces the study of youth informatics. Presents essential concepts of the study of youth and informatics. Explores the connection between youth, technology, and community. Project-driven with intensive experiential learning components.

INSC 593 Seminar in Youth Informatics (3) Explores key areas in youth informatics. Seminar includes discussion of basic, applied, and evaluative research and projects at the national and international levels. Covers research trends in youth informatics. Provides a forum for presentation and criticism of past and current research by students.

Rationale: These two courses are being added to support the new youth informatics certificate. Impact on other units: None. Financial Impact: None.

Learning Outcomes: above two courses will support program learning outcomes 3, 4, 7, 8, and 9.

DROP

INSC 585 Information Technologies (3)

REVISE TITLE AND DESCRIPTION

INSC 576 Storytelling as a Communications and Learning Tool in Diverse Settings (3) Explores storytelling as a communications tool in information agencies and other types of corporate and not-for-profit organizations. Students will learn the history of storytelling, various types of stories, and best practices for gathering and telling stories.

Formerly: Storytelling in Libraries and Classrooms (3) Examines the history of those who influenced the programming and styles of storytelling. Additionally, the course will offer techniques and sources for selecting, preparing and telling stories to library and classroom audience.

Rationale: Our current definition is dated and too narrow in terms of potential audience. Storytelling skills have been identified as increasingly important in a number of fields (e.g., medicine, science communication, and business). The new title reflects recent development for storytelling and offers a better opportunity to attract students from other disciplines. Reflects a cutting edge approach to a traditional subject. Support from assessment activities: Impact on other units: None. Financial Impact: None.

Learning Outcomes: will support program learning outcomes 1, 3, 4, and 5

REVISE HOURS

INSC 596 Field-Based Experience in School Library Information Centers (2 or 4)

Formerly: 2

Rationale: The Tennessee State Department of Education requires students to accrue 200 unpaid clock hours in a school library in order to obtain their endorsement. In the past, we split that requirement into two semesters (100 hours each) to accommodate working teachers. We have increasing requests to do all 200 hours in one semester but the University does not permit enrolling in the same course twice within a single semester. This causes some students to have to stay an extra semester, just to complete the second 100 hours. More flexible option; students can choose to do 100 or 200 hours in one semester, according to their situation. Reflects student requests and concerns, while still fulfilling state and University requirements Impact on other units: None. Financial Impact: None.

Learning Outcomes: will support program learning outcomes 2 and 3

REVISE TO ADD (RE) PREREQUISITE

INSC 581 Information Networking Applications (3)
(RE) Prerequisite(s): INSC 580 or instructor's consent.

Rationale: INSC 580 (Currently INSC 585) is a survey course, and students need this knowledge when they enter other Information Technology classes. Impact on other units: None Financial Impact: None.

Learning Outcomes: will support program learning outcomes 1 and 8

INSC 598 Web Design (3)
(RE) Prerequisite(s): INSC 581 or instructor's consent.

Rationale: INSC 598 was designed with the expectation that students have already taken INSC 581. Therefore, some of the basic tools covered in INSC 581 are not covered in INSC 598. Students need knowledge gained in INSC 581 in order to successfully complete work assigned in INSC 598. Impact on other units: None. Financial impact: None.

Learning Outcomes: will support program learning outcomes 1 and 8

II. PROGRAM CHANGES

SCHOOL OF INFORMATION SCIENCES

+ ADD CERTIFICATE – YOUTH INFORMATICS

IN THE 2016-2017 GRADUATE CATALOG, ADD HEADING, TEXT, AND REQUIREMENTS FOR NEW CERTIFICATE.

Youth Informatics Graduate Certificate
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 583, INSC 542, 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 hours and may be earned by completing the following:

- SIS masters' students: the 12-hour certificate may be earned by completing INSC 583, INSC 542, 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-hour certificate may be earned by completing INSC 583, INSC 542, 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.

SUPPORTING INFORMATION: Rationale: One of the priorities SIS is targeting in its strategic plan is excellence in teaching through increased outreach and engagement. This proposed youth informatics certificate program includes a course in Agricultural Leadership (ALEC 510) that Carrie Stephens, Professor and Graduate Coordinator of Youth Development, Agricultural Leadership, and Communications is in favor (please see her email below). Adding the Youth Certificate is available to all master's and doctoral students from across campus, regardless of discipline. This Certificate should: expand outreach and engagement efforts by training those working with youth in non-library settings, acknowledge the cultural role of youth as communicators and technology users, attract students to the SIS program from fields other than information sciences who may be recruited to pursue a degree in information sciences in the future, thus, leading to increase in enrollment; build bridges with departments and schools in various disciplines across campus, which could result in higher visibility and engagement; and strengthen the role of SIS in the community by reaching out to practitioners (including teachers and others) needing to pursue professional development or continuing education to fulfill employment requirements. Impact on other units: None. Financial Impact: New courses are added to support the program.

Email from Professor Carrie Stephens.

Hi Dania!

I am completely in favor of this addition to your curriculum. I will be teaching ALEC 510 next fall (fall 2016). Let me know if you have any questions.

Sincerely,

Carrie Stephens, Professor and Graduate Coordinator
University of Tennessee, Knoxville

REVISE REQUIREMENTS – INFORMATION SCIENCES MAJOR, MS

In the 2015-2016 Graduate Catalog revise program hour requirements as follows:

1. First paragraph, revise the first sentence by changing 42 semester hours to 36 semester hours.
2. In the same paragraph, revise the third sentence by changing 33 to 27.
3. Revise the second sentence under the "Additional Requirements – Thesis Option" heading by changing 42 hours to 36 hours.
4. Revise the third sentence under the "Additional Requirements – Non-Thesis Options" heading by changing (10 of 42) to (9 of 36).
5. Revise the third sentence under the "Non-Thesis Option – ePortfolio" subheading by changing (10 of 42) to (9 of 36).

Rationale: SIS is requesting a reduction in its program credit hours from 42 to 36. Even with these reductions, the SIS curriculum still aligns with the American Library Association (professional accrediting organization) accreditation criteria. This reduction makes this program more consistent and competitive with its peer and aspirational programs that deliver online library and information science instruction.

SIS' position in its academic market is weakened by several conditions, including the credit hour requirement. The total number hours for the SIS masters' degree currently exceeds the minimum requirements (per the UTK Graduate Catalog). Also, in contrast to its competitors, SIS lacks an undergraduate major as a revenue source. In addition, SIS charges the highest out-of-state tuition among many competitors offering an online degree program. Among the top 25 ALA-accredited programs in Library and Information Science, there are 19 online programs. Of these, 12 offer 36-hour degree programs. Two other ranked online programs, Syracuse and Kent State, offer 37 hour degree programs. There are a few programs with 42 or more hours, University of Wisconsin-Madison, for example, requires 42 hours.

However, of the four ranked online programs that require more than 37 hours, UTK SIS is the most disadvantaged because first, it is ranked lower than these programs and second, its high out-of-state tuition cost makes it the most expensive alternative for out-of-state students (based on the often-used Total Cost of Degree metric).

Impact on other units: None. Financial impact: The total cost of UTK SIS degree will be lower and, therefore, more competitively priced with the other available choices for an online degree program, as a result of the reduced credit hour requirement. The lower cost should make the SIS online program more affordable and attractive to more prospective students from in-state and out-of-state.

Learner Outcomes Supported: The change to the number of credit hours does not affect the nine student learner outcomes that guide the work of SIS.

COLLEGE OF EDUCATION, HEALTH, AND HUMAN SCIENCES

All Items Effective Fall 2016

I. COURSE CHANGES

DEPARTMENT OF CHILD AND FAMILY STUDIES

Student Learner Outcomes for the MS in Child and Family Studies

1. Students will be able to write a well-organized, logical, scientifically sound research paper
2. Students will demonstrate proficiency in analyzing and critiquing ideas in their field of interest from published texts, reports, and research proceedings.
3. Students will construct original arguments through written work that incorporate consideration of the relevant issues from the field and the theory that informs it.

Student Learner Outcomes for the PhD in Child and Family Studies

1. Students will be able to write a well-organized, logical, scientifically sound research paper.
2. Students will demonstrate proficiency in analyzing and critiquing ideas in their field of interest from published texts, reports, and research proceedings.
3. Students will construct original arguments through written work that incorporate consideration of the relevant issues from the field and the theory that informs it.

(CFS) Child and Family Studies

ADD

CFS 555 Cross-Cultural Research in Early Care and Education (3) Students will design cross-cultural research with international partners including in-depth review of and response to challenges and considerations for cross-cultural research studies; the analyses of historical and contemporary cross-cultural research studies, qualitative research methods, and exposure to diverse cultural contexts are emphasized.

Rationale: Course will prepare students to critically analyze research and theory in the field and to design and implement cross-cultural research. Course Format: Course will be taught on campus as a traditional lecture/seminar course. Impact on other units: None. Financial Impact: None; this has been taught previously as a special topic course and will be taught by existing faculty as part of their normal teaching loads.

Learning outcomes supported: Supports Learner Outcomes #1, 2, and 3 in the M.S. programs and the PhD program
Support from assessment activities: The course was offered as a special topic in Fall of 2014 and enrollment of students from CFS and other departments indicated that there is demand for content related to cross-cultural research and early childhood education. Faculty in the department also indicated that there is a need for more international early childhood education related content in order to keep up with current trends in the field.

REVISE TO ADD REGISTRATION PERMISSION

CFS 565 Practicum in Human Development or Family Studies II (3)
Registration Permission: Consent of Instructor.

Rationale: Adding the registration requirement of "consent of instructor" will make this consistent with CFS 564 (Practicum in Human Development or Family Studies I). Also, because this is an individually supervised course, it is important that a student has made arrangements with their instructor prior to registering for the course. Impact on other units: None. Financial Impact: None.

Learning outcomes supported: Does not impact student learner outcomes
Support from assessment activities: Faculty in the department indicated that the course registration restrictions should be consistent for individually directed courses such as this.

CFS 500 Thesis (1-15)
Registration Permission: Consent of Instructor.

Rationale: Adding Registration Permission of "consent of instructor" will make this consistent with other individually supervised courses such as CFS 564. Also, because this is an individually supervised course, it is important that a student has made arrangements with their instructor prior to registering for the course. Impact on other units: None. Financial Impact: None.

Learning outcomes supported: Does not impact student learner outcomes
Support from assessment activities: Faculty in the department indicated that the course registration restrictions should be consistent for individually directed courses such as this.

CFS 600 Doctoral Research and Dissertation (3-15)
Registration Permission: Consent of Instructor.

Rationale: Adding the registration requirement of "consent of instructor" will make this consistent with other individually supervised courses such as CFS 564 (Practicum in Human Development or Family Studies I). Also, because this is an individually supervised course, it is important that a student has made arrangements with their instructor prior to registering for the course. Impact on other units: None. Financial Impact: None.

Learning outcomes supported: Does not impact student learner outcomes
Support from assessment activities: Faculty in the department indicated that the course registration restrictions should be consistent for individually directed courses such as this.

REVISE TO DROP CREDIT RESTRICTION

CFS 580 Special Topics in Child and Family Studies (1-3)

Formerly: Credit Restriction: Maximum 3 hours may be applied to child and family studies specialization electives for the master's degree.

Rationale: Removing the credit restriction of only 3 hours being applied to the CFS specialization electives for the master's degree will make this consistent with the CFS master's program requirements, which do not restrict the use of CFS 580 in the specialization electives. Thus, this fixes an inconsistency between the program requirements and the course description for CFS 580. Impact on other units: None. Financial Impact: None.

Learning outcomes supported: Does not impact student learner outcomes
Support from assessment activities: No assessment activities were conducted because this change is intended to fix an inconsistency between the MS program requirements and the CFS 580 course description.

CFS 610 Advanced Special Topics in Child and Family Studies (1-3)

Formerly: Credit Restriction: Maximum 3 hours may be applied to child and family studies specialization electives for the master's degree.

Rationale: Removing the credit restriction of only 3 hours being applied to the CFS specialization electives for the master's degree will make this consistent with the CFS MS program requirements, which do not restrict the use of CFS 610 in the specialization electives. Thus, this fixes an inconsistency between the program requirements and the course description for CFS 610. Impact on other units: None. Financial Impact: None.

Learning outcomes supported: Does not impact student learner outcomes
Support from assessment activities: No assessment activities were conducted because this change is intended to fix an inconsistency between the MS program requirements and the CFS 610 course description.

DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

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

Student Learner Outcomes for the PhD in Higher Education Administration
1. HEA student will relate classroom experiences to current trends and practices in the field by attending and/or participating in at least one professional conference per year in the program.
2. HEA students will propose independent research, demonstrating the ability to design and defend research proposals.

Student Learner Outcomes for the EdS in Education with a concentration in Educational Administration:
1. Students will illustrate mastery of the core knowledge of the PreK-12 school leadership field, as guided by the professional standards.
2. Students will demonstrate the skills and dispositions required for PreK-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.

Student Learner Outcomes for the MS in College Student Personnel:
1. CSP students will relate classroom experiences to current trends and practices in the field by attending and/or participating in at least one professional conference during their two years in the program.
2. CSP students will practice classroom-learned competencies and identify new job-related skills by effectively completing a meaningful, learning-based practicum experience.

Student Learner Outcomes for the MS in Educational Administration:
1. Students will illustrate mastery of the core knowledge of the PreK-12 school leadership field, as guided by the professional standards.
2. Student will apply the skills and dispositions required for PreK-12 school leadership licensing.
3. Students will exhibit an understanding of a specialized area of competency for K-12 leadership practice.

Student Learner Outcomes for the Graduate Certificate in (PreK-12) Educational Administration:
1. Students will illustrate mastery of the core knowledge of the PreK-12 school leadership field, as guided by the professional standards.
2. Students will demonstrate the skills and dispositions required for PreK-12 school leadership licensing.

(EDAM) Educational Administration

DROP

EDAM 606 Leadership Forum (3)

Rationale and Assessment Activities: The department concludes it no longer needs this course for any of our programs. Impact on other units: None. Financial Impact: None. Learning Outcomes: None.

EDAM 553 Strategic Planning (3)

Rationale: We are dropping this course and adding a new course with a new description and content, EDAM 552. This course needed to change to meet new state licensure requirement for Principal Preparation and is consonant with SACS student learner outcome about mastery of the core knowledge of Pre-K12 leadership field. Impact on other units: None. Financial Impact: None.

DROP PRIMARY CROSS-LISTED COURSE

EDAM 516 Research Methods (3)
Cross-listed: (Same as Higher Education Administration 516.)

Rationale: EDAM 516 and HEAM 516 are cross listed. The EDAM course changed its focus, therefore it wishes to remove the cross-listing and drop the course. A new course will be added, EDAM 520. This course needed to change to meet the new licensure requirements for Principal Preparation and is consonant with SACS student learner outcome about mastery of the core knowledge of Pre-K12 leadership field. EDAM owns the course. Impact on other units: No relationship. Format of Course: Regular semester format. Financial Impact: None.

ADD

EDAM 520 Using Data for School Improvement (3) 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.

Rationale: Formerly EDAM 516, Research Methods. This course needed to change to meet new state licensure requirements for Principal Preparation. Format of Course: Regular full term course taught on line. Impact on other units: None. Financial Impact: None.

Learner Outcomes: This course supports SACS learner outcome # 1 for the EdS, MS, and PreK-12 Certificate programs. Support from assessment activities: It is consonant with SACS student learner outcomes about mastery of the core knowledge of Pre-K12 leadership field.

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.

Rationale: Formerly EDAM 553, Strategic Planning. This course needed to change to meet new state licensure requirements for Principal Preparation. Format of Course: Regular full term course taught on line. Impact on other units: None. Financial Impact: None.

Learner Outcomes: This course supports SACS learner outcome # 1 in the EdS, MS, and PreK-12 Certificate programs. Support from assessment activities: It is consonant with SACS student learner outcome about mastery of the core knowledge of Pre-K12 leadership field.

EDAM 610 Advanced Seminar in Leadership Theory (3) Will analyze leadership principles from a theoretical and practical framework. Ideas and theories distinctive to the study of leadership will be approached through narratives, speeches, interviews, video, and case studies. Reflection and discussion on the major ideas presented in these works will allow students to integrate their own knowledge and philosophies with those of leaders both within and outside of the field of education.
Registration Restriction(s): Minimum student level – graduate.

Rationale: To uncross listing of EDAM 605 and change to this course to more accurately reflect content. Impact on other units: No relationship to other courses within or outside of program. Format of Course: Regular semester format. Financial Impact: Involves no financial impact.

Learner Outcomes: None. Support from assessment activities: To reflect changing needs of the two PhD programs.

DROP SECONDARY CROSS-LISTED COURSE (PRIMARY COURSE HEAM 605 IS REMAINING ACTIVE)

EDAM 605 Advanced Seminar in Administrative Theory (3)

Formerly: (Cross-listed: (See Higher Education Administration 605.)

Rationale: There are currently two courses cross-listed in Educational Administration and Higher Education, EDAM 605 and HEAM 605. HEAM is the owner of the course and will keep HEAM 605. The description for EDAM 605 no longer fits EDAM needs. Impact on other

units: The effect of the proposal is to drop 605 from EDAM program listing, but to add a new course EDAM 610, Advanced Seminar in Leadership Theory. Financial Impact: None.

(ELPS) Educational Leadership and Policy Studies

ADD

ELPS 612 Academic Writing (3) Introductory course for doctoral students. Provides a guide through the process of academic writing, following the practices of APA for manuscript publication and the guidelines of dissertation writing. Peer feedback and individualized instruction is a hallmark of this course. The goal of this course is to provide students with the knowledge and skills to become better academic writers through practice of successful strategies and habits related to the writing process as well as examination of exemplars.
Registration Restriction(s): Minimum student level – graduate.

Rationale: Change course from a special topics course to a standard course. Impact on other units: No relationship to other courses within or outside of program. Format of Course: Regular semester format. Financial Impact: Involves no financial impact.

Learner Outcomes: Supports learning outcome # 1 in the Phd in Education with Leadership Studies concentration program.
Support from assessment activities: Internal assessment of PhD student need.

ELPS 616 Mixed Methods Research (3) Provides an introduction to mixed methods of research design, focused on applications in educational settings. Prerequisite: At least one quantitative and one qualitative graduate research methods class.
Registration Restriction(s): Minimum student level – graduate.

Rationale: Change course from a special topics course to a standard course. This course is needed by doctoral students both within and outside the department. Impact on other units: None. Format of Course: Regular semester format. Financial Impact: We have been offering it as a special topics course, so nothing will change.

Learner Outcomes: This course supports learning outcome # 1 and # 2 in the Phd in Education with Leadership Studies concentration program and # 2 in the Higher Education PhD program.
Support from assessment activities: This was offered as a special topics course which demonstrated the need to continue as a standard course.

(461) Higher Education Administration

DROP

HEAM 630 Globalization in Higher Education (3)

Rationale & Assessment Activities: The department no longer needs this course for any of the programs. Impact on other units: None. Financial Impact: None.

ADD

HEAM 517 Assessment in Student Affairs (3) Designed to provide the aspiring or current practitioner with a basis for departmental assessment to promote effective design, implementation, and strategic planning. Will include rationale for assessment practice, an overview of formal and informal assessment efforts at multiple levels (unit/department, institution, professional), and an introduction to national standards.

Rationale: Change course from a special topics course to a standard course. This course is a required component of the College Student Personnel program. Assessment has become a critical competency required by student affairs practioners. We tried it out as a special topics course and now seek to change it to a regular course. The course is consonant with the SACS learner outcomes for CSP and with current practices in the field. Impact on other units: None. Format of Course: Regular semester format. Financial Impact: None.

Learner Outcomes: This course supports learning outcome # 1 in the College Student Personnel program.
Support from assessment activities: We undertook a systematic assessment of the needs in the field as presented in existing research and literature. This assessment led us to add the course to the CSP program.

HEAM 518 Research Design in Student Affairs (3) Introduces the core concepts and applications of research design in student affairs. Areas of emphasis include locating, interpreting, critiquing, and writing about research in the field.

Rationale: EDAM 516 and HEAM 516 were cross listed. EDAM owns the course and will keep it. HEAM will add the new course number HEAM 518 and new title since it was a required course for the CSP program. Impact on other units: No relationship to other courses within or outside of program. Format of Course: Regular semester format. Financial Impact: None. Nothing has changed except the new number and title.

Learner Outcomes: None. We are not changing the course content or catalog description. We were forced to change the number in uncross-listing it from a course description that did change (EDAM 516). This has long been a required course in the CSP program necessary for students to learn to conduct research for their problems papers.
Support from assessment activities: We are changing to a standard course based on the Council for the Advancement of Standards in Higher Education which continues to guide the content of the program.

HEAM 520 Finance and Budgeting in Student Affairs (3) Will expose emerging student affairs practitioners and/or college administrators to the essential elements of budgeting and financial management in higher education. Emphasis will be placed on understanding basic principles of budgeting, the role of budget managers, budget and finance terminology, and emerging practices and policies that influence higher education finance. Furthermore, this course is designed to provide emerging practitioners with the opportunity to learn, discuss, and analyze the relationship between financial management and fiscal decision-making.

Rationale: Change course from a special topics course to a standard course. This course is an important component of the College Student Personnel program. Finance and budgeting has become a critical competency required by student affairs practitioners. The course is consonant with the SACS learner outcomes for CSP and with current practices in the field. Impact on other units: No relationship. Format of Course: Regular semester format. Financial Impact: None.

Learner Outcomes: This course supports learning outcome # 1 in the College Student Personnel program.
Support from assessment activities: We are changing to a standard course based on the Council for the Advancement of Standards in Higher Education which continues to guide the content of the program.

HEAM 521 Multiculturalism in U. S. Higher Education (3) Will gain awareness, knowledge and skill to identify and interrupt forms of oppression (racism, sexism, genderism, able-ism, classism, and homophobia) detrimental to inclusive learning communities (e.g., higher education) and working environments. During the semester, students will be encouraged to investigate power, privilege, and oppression using multiple intersecting identities as a lens for exploring and promoting social justice.

Rationale: Change course from a special topics course to a standard course. This course is an important component of the College Student Personnel program. Multicultural understanding has become a critical competency required by student affairs practioners. The course is consonant with the SACS learner outcomes for CSP and with current practices in the field. Impact on other units: No conflict; has been taught for three years as a special topics course. It is a required course in the College Student Personnel program. Format of Course: Regular semester format. Financial Impact: None.

Learner Outcomes: This course supports learning outcome # 1 in the College Student Personnel program.
Support from assessment activities: We are changing to a standard course based on the Council for the Advancement of Standards in Higher Education which continues to guide the content of the program.

HEAM 620 Uses of Large Data Sets in Educational Research (3) Introduces students to large national datasets and applications of these datasets in educational research. This class includes discussions on various national data, and statistical procedures and research designs appropriate for national data, as well as hands-on exercises on exploring feasible research topics using the datasets. Students are required to complete research projects using the national data sponsored by the National Center for Education Statistics (NCES) in this class.
Registration Restriction(s): Minimum student level – graduate.

Rationale: Change course from a special topics course to a standard course. This course is consonant with SACS Learner Outcomes for the Higher Education Administration PhD (#2). It was added to help doctoral students develop and defend research proposals based on the use of large data sets. Impact on other units: None. It has no relationship to other courses or programs. Format of Course: Regular semester format. Financial Impact: None.

Learner Outcomes: This course supports learning outcome # 1 and # 2 in the PhD in Education with a concentration in Leadership Studies and with # 2 in the Higher Education PhD program.
Support from assessment activities: We are changing to a standard course to serve the needs of our doctoral students.

HEAM 625 History and Philosophy of Higher Education (3) Intended to serve as an introduction to the study of American Higher Education. Offers an overview of the historical development and philosophical evolution of American Higher Education and engages major principles and issues related to higher education mission, curriculum, governance, student life, and faculty role and responsibility. Also engaged in the course are contemporary critique and reform movements that are shaping the future of American Higher Education.
Registration Restriction(s): Minimum student level – graduate.

Rationale: Change course from a special topics course to a standard course. On the bases of the internal review of the program the faculty determined the need to have this as a required, core course. Impact on other units: None. It is a required course in Higher Education Administration PhD program. Format of Course: Regular semester format. Financial Impact: None.

Learner Outcomes: None. No SACS learner outcomes are involved. However, an understanding of the history and philosophy of Higher Education is vital to becoming a higher education administrator.
Support from assessment activities: Changing to a standard course because it is required in the Higher Education PhD program.

DROP SECONDARY CROSS-LISTED COURSE

HEAM 516 Research Methods (3)

Formerly: Cross-listed: (See Educational Administration 516.)

Rationale: EDAM 516 and HEAM 516 are cross listed. EDAM owns the course and will keep it. HEAM will add a new course number HEAM 518 since it was a required course for the CSP program. Impact on other units: No relationship. Format of Course: Regular semester format. Financial Impact: None.

REVISE PRIMARY COURSE TO REMOVE CROSS-LISTING AND REVISE DESCRIPTION

HEAM 605 Advanced Seminar in Administrative Theory (3) A doctoral seminar designed for students pursuing careers in higher education leadership positions. Focus will be on current day "best practices" for leading and managing within the higher education environment. Topics include strategies for enhanced communication, personnel and conflict management, budgetary decision making, and discussion regarding the various styles of leadership. Students will be required to engage in extensive readings and complete various written projects that coincide with the topical content of the class. The course culminates with a capstone project that each student will research, prepare, and present during the final class period.

Formerly: Interdisciplinary seminar. Readings selected by faculty for research and scholarly value from early to current classic theoretical studies and current periodical literature in administrative and organizational theory.
Cross-listed: (Same as Educational Administration 605.)

Rationale: There are currently two courses cross-listed in Educational Administration and Higher Education, EDAM 605 and HEAM 605. EDAM 605 and the cross-listing were deleted at the September 2015 CRC meeting. HEAM is the owner of the course and will keep HEAM 605. We are refining the catalog description to better reflect the course offered. Impact on other units: It is a requirement in the Higher Education PhD program and will not affect other programs. Format of Course: Regular semester format. Financial Impact: None. HEAM 605 was offered yearly for the PhD program, thus there will be no change. SACS Learner Outcomes Supported: None. Assessment Activities: None.

(UNRA) University Research Administration

DROP

UNRA 504 Fundamentals of Sponsored Research (3)

UNRA 505 The Federal Framework (3)

UNRA 506 Non-Government Sponsored Programs (3)

UNRA 507 Contracting for Sponsored Programs (3)

UNRA 508 Compliance in Research Administration (3)

UNRA 509 Sponsored Programs Accounting (3)

Rationale and Assessment Activities: There is no apparent need for the University Research Administration program. Since the program was never implemented, dropping courses will not affect anyone. Impact on other units: None. Financial Impact: None. Learner Outcomes: None.

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELING

Student Learner Outcomes for the MS in Counseling
1. Students will demonstrate skills for individual counseling
2. Students will demonstrate skills for group counseling
3. Students will demonstrate an understanding of a theoretical orientation

Student Learner Outcomes for the Graduate Certificate in Online Teaching and Learning
1. Students will demonstrate their ability to create an instructional design plan for online teaching and learning
2. Students will demonstrate their ability to complete a real-world online teaching and learning project

Student Learner Outcomes for the PhD in Education with a concentration in Learning Environments and Educational Studies
1. Students will demonstrate mastery of scholarly writing pertaining to an area of study
2. Students will demonstrate ability to determine appropriate professional outlets aligned with their interests
3. Students will demonstrate interdisciplinary knowledge and application of learning environment design

Student Learner Outcomes for the Graduate Certificate in Rehabilitation Counseling Deafness Rehabilitation
1. Students will demonstrate fluency in American Sign Language (ASL).
2. Students will demonstrate knowledge of deaf culture and the deaf community.
3. Students will demonstrate knowledge of community resources and services available for persons who are deaf or hard of hearing in diagnosing hearing loss, accommodating functional limitations, and obtaining and maintaining employment.
4. Student will demonstrate knowledge of adequate communication/counseling techniques with individuals who are deaf or hard of hearing.
5. Student will demonstrate knowledge of current issues concerning the deaf community, including special populations within the deaf community.

Student Learner Outcomes for the PhD in School Psychology
1) Students will apply appropriate research methodology in a manner that allows them to contribute to the discipline
2) Students will master the core knowledge in the discipline in order to succeed in school psychology

(COUN) Counselor Education

ADD

COUN 565 Counseling Children and Adolescents (3) Childhood issues, developmentally appropriate counseling treatment strategies, and basic skills necessary for effectively counseling and communicating with children, youth and stakeholders.
(DE) Prerequisites: 480 or 551 or 554.

Rationale: Our accrediting body, CACREP, requires the school counseling program to move from 48 to 60 credit hours. As part of this transition, we are utilizing three existing courses and creating one new course. School counseling and other Counselor Education faculty see the course as needed for school counseling concentration students, and it could also be a helpful course topic for students in other concentrations and majors, such as clinical mental health counseling or school psychology. Impact on other units: None. Financial Impact: We plan to teach this course during alternate summers, so it should have a minimal financial impact. Course Format and Location: Seminar-style course, on campus only.

Learning Outcomes Supported: May enhance student learning in outcomes 1, 2, & 3.
Support from assessment activities: Discussions with counselor education faculty led to suggesting that this course be taught. Graduating students completing exit interviews have made comments suggesting a desire to have had such a course. A review of CACREP-accredited school-counseling programs suggests that such a course is common among similar accredited programs.

(LEES) Learning Environments and Educational Studies

ADD

LEES 659 Cultural Historical Activity Theory and Methods (3) Introduction to works of Russian psychologists during the 1920s such as Vygotsky and Leontiev, and also works of contemporary Cultural Historical Activity Theory (CHAT) scholars from Russia, Scandinavia, and North America. Participants will specifically examine how to engage in qualitative research from a CHAT perspective. Participants will engage in qualitative data analysis of complex human activity with Activity Systems Analysis.
Registration Restriction(s): Minimum student level – graduate.

Rationale: This course can be taken as part of the core electives for the Education Major (LEES concentration). Impact on other units: With approval of the Graduate Certificate in Qualitative Research in Education coordinator, this course can fulfill the requirements for the certificate. Financial Impact: None. Existing faculty will teach this course as part of regular load. This course had been taught with a special topics designation in fall 2014 with 5 students enrolled and in fall 2015 with 11 students enrolled. Learning Outcomes Supported: None. Course Format and Location: On campus face-to-face course.

Support from assessment activities: Assessment activities from fall 2014 show that through this course students were able to engage in interdisciplinary qualitative research from a CHAT perspective and engage in scholarly writing about learning environments. Additional Documentation, when necessary: See attached syllabus.

(RHCO) Rehabilitation Counseling

ADD

RHCO 521 Rehabilitation Services in the Deaf Community (3) Provides an overview of the specialized field of deafness within the rehabilitation counseling profession.
Recommended Background: at least intermediate level of skill with the Sign Language Proficiency Inventory or equivalent

Rationale: Needed for Graduate Certificate in Deafness Rehabilitation. Impact on other units: None. Financial Impact: None. Costs of new course delivery will be covered by federal grant and then by distance education incentive. Course Format and Location: Standard Lecture; Distance Education.

Learning Outcomes Supported: 1, 2, 3.
Support from assessment activities: The course is a part of the proposed Graduate Certificate in Deafness Rehabilitation, which is based on community need.

RHCO 522 Communication with Persons who are Deaf or Hard of Hearing (3) Provides an overview of communication strategies for working in rehabilitation counseling settings with clients who are deaf or hard of hearing.
Recommended Background: at least intermediate level of skill with the Sign Language Proficiency Inventory or equivalent

Rationale: Needed for Graduate Certificate in Deafness Rehabilitation. Impact on other units: None. Financial Impact: None. Costs of new course delivery will be covered by federal grant and then by distance education incentive. Course Format and Location: Standard Lecture; Distance Education.

Learning Outcomes Supported: 1, 2, 3, & 4.
Support from assessment activities: The course is a part of the proposed Graduate Certificate in Deafness Rehabilitation, which is based on community need.

RHCO 523 Special Populations and Topics in Deafness Rehabilitation (3) Provides an overview of the diverse populations within the field of deafness rehabilitation.
Recommended Background: at least intermediate level of skill with the Sign Language Proficiency Inventory or equivalent

Rationale: Needed for Graduate Certificate in Deafness Rehabilitation. Impact on other units: None. Financial Impact: None. Costs of new course delivery will be covered by federal grant and then by distance education incentive. Course Format and Location: Standard Lecture; Distance Education.

Learning Outcomes Supported: 5
Support from assessment activities: The course is a part of the proposed Graduate Certificate in Deafness Rehabilitation, which is based on community need.

(EDPY) Educational Psychology

ADD

EDPY 547 Cognitive Behavioral Therapy: Research and Practice (3) Skill training in cognitive behavioral therapy emphasizing assessment, diagnosis, and treatment of social and emotional disorders in children and adolescents, including parent training models and programs.

Rationale: The students in the School Psychology program have been requesting more applied clinical training. This training will make their application for internship stronger. In addition, APA accreditation requires additional training in Affective Basis of Behavior. This class will meet this accreditation requirement. Impact on other Units: None. Financial Impact: None. This course has been taught once as a special topics course. Two program courses are being deleted (SCHP 545, SCHP 650).

Learning Outcomes Supported: No changes
Support from assessment activities: The School Psychology faculty conducted a full program curriculum review to areas of training needs. These changes will help the program meet accreditation requirements and meet student training needs.

EDPY 548 Practicum in Cognitive Behavioral Therapy (3) Supervised clinical practice in assessment, diagnosis, and treatment of social and emotional disorders of children and adolescents, emphasizing parent involvement to improve behavioral skills of children and adolescents.

Rationale: The students in the School Psychology program have been requesting more applied clinical training. This training will make their application for internship stronger. In addition, APA accreditation requires additional training in Affective Basis of Behavior. This practicum will meet this accreditation requirement. Impact on other Units: None. Financial Impact: None. This course has been taught once as a special topics course. Two program courses are being deleted (SCHP 545, SCHP 650).

Learning Outcomes Supported: No changes
Support from assessment activities: The School Psychology faculty conducted a full program curriculum review to areas of training needs. These changes will help the program meet accreditation requirements and meet student training needs.

(SCHP) School Psychology

DROP

SCHP 545 Psychoeducational Consultation (3)

Rationale: We are combining the content from this class into an existing practicum class (SCHP 546 Psychoeducational Consultation) to reduce redundancy in the program. Therefore, SCHP 545 can be deleted. Impact on other Units: None. Financial Impact: None.

Learning Outcomes Supported: No changes
Support from assessment activities: The School Psychology faculty conducted a full program curriculum review to examine areas of redundancy. These changes continue to match to accreditation requirements and make the program more efficient.

SCHP 650 Introduction to Professional Practice in School Psychology (1)

Rationale: SCHP 650 and SCHP 540 (Seminar in School Psychology) are introductory classes which provide students with knowledge of the roles and functions of school psychologists. Course content from SCHP 650 will be provided in SCHP 540. Therefore SCHP 650 can be deleted. Impact on other Units: None. Financial Impact: None.

Learning Outcomes Supported: No changes
Support from assessment activities: The School Psychology faculty conducted a full program curriculum review to examine areas of redundancy. These changes continue to match to accreditation requirements and make the program more efficient.

REVISE TITLE, HOURS, AND DESCRIPTION

SCHP 540 Seminar and Practicum in School Psychology (4) Introduction to the field of school psychology, including the roles that school psychologists assume, clients served, and effective services for diverse populations. Includes school-based interactions, interviews and observations with school psychologists and related educational professionals.

Formerly: Seminar in School Psychology (3) Essentials of theory and practice of school psychology as professional specialty. Consideration of history and current issues in school psychology.

Rationale: SCHP 540 and SCHP 650 (Introduction to Professional Practice in School Psychology) are introductory classes which provide students with knowledge of the roles and functions of school psychologists. SCHP 540 is a lecture-based class while SCHP 650 requires

student to shadow a school psychologist to observe the daily job requirements. Content is more efficiently and coherently delivered in a single course. This new class would be titled SCHP 540: Seminar and Practicum in School Psychology and would be 4 credits to reflect the combination of course content and applied experiences. SCHP 650 is being dropped in this same set of course changes. Impact on other Units: None. Financial Impact: None.

Learning Outcomes Supported: No changes
Support from assessment activities: The School Psychology faculty conducted a full program curriculum review to examine areas of redundancy. These changes continue to match to accreditation requirements and make the program more efficient.

REVISE DESCRIPTION

SCHP 546 Practicum in Consultation and Intervention (1-6) Didactic instruction for and supervised school-based experiences in behavioral consultation.

Formerly: Application of consulting and intervention skills to educational settings.

Rationale: Combining an existing didactic class (SCHP 545 Psychoeducational Consultation) with the practicum (SCHP 546) to reduce redundancy in the program. SCHP 545 is being dropped in this same set of course changes. Impact on other Units: None. Financial Impact: None.

Learning Outcomes Supported: None
Support from Assessment Activities: The School Psychology faculty conducted a full program curriculum review to examine areas of redundancy. These changes continue to match to accreditation requirements and make the program more efficient.

DEPARTMENT OF KINESIOLOGY, RECREATION, AND SPORT STUDIES

Student Learner Outcomes for the MS in Recreation & 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 profession.
3. Students will be able to conduct research and understand its importance in the decision-making process.

(RSM) RECREATION AND SPORT MANAGEMENT

REVISE GRADING RESTRICTION (FROM S/NC ONLY TO LETTER GRADE)

(RSM) 590 Practicum (3)

Formerly: Grading Restriction: Satisfactory/No Credit Grading Only

Rationale: This revision provides an opportunity to differentiate levels of student performance. Impact: Students will invest more energy into being successful in their field experience opportunities to earn a good grade in the course. Financial Impact: None.

Learning outcomes supported: Student Learner Outcomes 1 and 3
Assessment activities leading to change: Review of work logs over the past year indicates the time and energy students invest in reflecting on their experiences and what they are learning each week. Additionally, site supervisor evaluation scores indicate some students are performing better than others.

DEPARTMENT OF NUTRITION

Student Learner Outcomes for the MS in Nutrition
1. Upon completing the Master's degree program the student will attain entry level nutrition related employment.
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 the student will have demonstrated the ability to write a NIH-formatted specific aims and research strategy for a grant.
4. 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.

REVISE RECOMMENDED BACKGROUND, ADD REGISTRATION RESTRICTION, AND DROP (RE) PREREQUISITE

NUTR 505 Nutrition Intervention in the Community (3)
Recommended Background: Advanced community nutrition course.
Registration Restriction: Nutrition major, MS students only.

Formerly: (RE) Prerequisite(s): 412.
Registration Restriction: None.
Recommended Background: Advanced community nutrition course or consent of the instructor.

Rationale: Having NUTR 412 as a prerequisite prevented all incoming graduate students, except those from our undergraduate program, from registering for the course without going through administrative staff. Impact on other units: None. This is only a housekeeping change. Financial Impact: None. This change does not change the existing faculty load.

Learner Outcomes Supported: This change does not address a specific SLO.
Support from assessment activities: This change will clarify who is able to register for this course.

DEPARTMENT OF PUBLIC HEALTH

Student Learner Outcomes for the DrPH in Public Health
Students completing the DrPH program should be able to:
1. Demonstrate a high level of thinking and practice skill in recognizing, defining, and addressing public health problems and needs;
2. Demonstrate competence in the five core areas of public health: biostatistics; epidemiology; environmental health; health planning, policy, and administration; and social and behavioral sciences;
3. Demonstrate professionalism, advocacy, leadership, ethical principles, and scientific integrity in advanced public health practice;
4. Provide collaborative leadership in the development of public health practice models for diverse populations.

Student Learner Outcomes for the MPH in Public Health
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 12 core public health competencies.

(PUBH) Public Health

ADD

PUBH 560 US Healthcare Delivery (3) Exploration of the organization, financing, reimbursement, and performance of the U.S. health care delivery from a systems perspective.
Registration Restriction(s): Minimum student level – graduate.

Rationale: This 3-hour course provides an overview of the US healthcare delivery system, providing important contextual information regarding public health and the delivery of health care services and an overview of major problems related to cost, quality, access, outcomes, and system performance, as well as an introduction to major health policies. The course has been offered as an elective for all MPH and doctoral students in Public Health as a Special Topics course for two years. In addition, the course is a substitute for a required course for the Nursing graduate certificate in health policy or as an elective. The course specifically addresses learner objective 4 of the MPH program related to the 12 public health core competencies, specifically Policy Development/Program Planning Skills. Course format and location: Course is offered in a blended format with two onsite sessions. Impact on other units: Nursing uses this as a substitute for one of their required courses in the grad certificate in health policy and have provided a memo of support. Financial impact: None. Course will be taught by existing faculty.

Student learner objectives impacted: Learner objective 4 of the MPH program.
Support from assessment activities: Course was originally offered as a Special Topics course based on student demand and needs. The course has been favorably rated the two years it has been offered.

REVISE DESCRIPTION AND COMMENT

PUBH 587 Internship (3) Internship in either approved organization or research setting under supervision of designated preceptor.
Comment(s): One semester advance notice required.

Formerly: PUBH 587 Internship (3) Internship (community health education, gerontology, or health planning/administration) in either approved organization or research setting under supervision of designated preceptor.
Comment(s): MPH admission and one semester advance notice required.

PUBH 588 Internship (3) Internship in either approved organization or research setting under supervision of designated preceptor.
Comment(s): One semester advance notice required.

Formerly: PUBH 588 Internship - Internship (community health education, gerontology, or health planning/administration) in either approved organization or research setting under supervision of designated preceptor.
Comment(s): MPH admission and one semester advance notice required.

PUBH 589 Internship (3) Internship in either approved organization or research setting under supervision of designated preceptor.
Comment(s): One semester advance notice required. Available only for approved extended placements.

Formerly: PUBH 589 Internship - Internship (community health education, gerontology, or health planning/administration) in either approved organization or research setting under supervision of designated preceptor.
Comment(s): MPH admission and one semester advance notice required. Available only for approved extended placements.

Rationale: The new description removes concentration names and requirement of MPH admission. The list of concentrations included in the description is out of date. Gerontology and health planning/administration are no longer offered. Additionally, newer concentrations such as health policy/management and veterinary public health are not listed despite the fact that internship is required for those concentrations. Also, this course is required for students seeking the health policy certificate in addition to MPH students. To avoid confusion, all references to specific concentrations should be removed. Course format and location: Internship. Impact on other units: No impact; this is only a wording change. Financial impact: None; this is only a wording change.

Student learner objectives impacted: No objectives impacted for this minor change
Support from assessment activities: No assessments needed for this minor change.

DEPARTMENT OF THEORY AND PRACTICE IN TEACHER EDUCATION

Student Learner Outcomes for the BS in Education in Spec Education
1. Planning: Proposes appropriate curricular objectives based on State and/or Common Core Standards.
2. Instruction: Develops instructional activities that take into account students' strengths, interests, and needs to enable each student to advance and accelerate his/her learning.
3. Assessment: Combines formative and summative assessment as appropriate to support, verify, and document learning.
4. Uses current technologies to maximize content learning in varied contexts.
5. Learning Environments: Designs a safe, positive learning climate of openness, mutual respect, support, and inquiry.
6. (From InTASC Standard 2) Uses understanding of individual differences and diverse cultures and communities to promote inclusive learning and/or social environments that enable all individuals to meet high standards.
7, a-b (From InTASC Standard 10) Seeks appropriate roles and opportunities to take responsibility for well-being of individuals with disabilities, to collaborate with students, families, colleagues, school professionals, and community members to ensure individual learner growth, and to advance well-being of individuals with disabilities.

Student Learner Outcomes for the MS in Teacher Education, Track I
1, a-c 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

Student Learner Outcomes for the MS in Teacher Education, Track II
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)

Student Learner Outcomes for the EdS in Teacher Education Major
1 Demonstrate an adoption of an experimental and problem-solving orientation
2, a-b 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

Student Learner Outcomes for the PhD in Education with Literacy Studies Concentration, Special Education, Deaf Education, and Interpreter Education Concentration and Teacher Education Concentration
1, a-b Demonstrates college-level teaching proficiency
2 Effectively supervises pre-service teacher candidates and collaborates with school-based partners
3 Demonstrates a rich knowledge of current literature in his/her field sufficient to utilize such information for the improvement of practice.
4, a-b Demonstrates the ability to do independent and/or collaborative research and the capacity to advance the knowledge base in his/her field.

(EDDE) Education for the Deaf and Hard of Hearing

REVISE TITLE, HOURS, AND DESCRIPTION

EDDE 419 Speech Development and Aural Habilitation/Rehabilitation of the Deaf and Hard of Hearing (3)
Introduction to speech development, perception and production of speech, fundamental aspects of auditory anatomy and physiology, amplification, and aural habilitation/rehabilitation.

Formerly: Speech Development of the Deaf and Hard of Hearing (4) Theories of speech development, approaches in training perception and production of speech, and aural habilitation. Practicum experiences.

Rationale: The course has a speech and audiology focus. The new title and description better reflect the content. We are no longer requiring a practicum with this class so we are reducing credit hours. Impact on other units: none. Financial impact: none.

Learner outcomes supported by this change: Learner outcomes are not impacted by this change.
Support for this change from assessment activities: Instructors note a speech and audiology focus imbedded in the course.

REVISE DESCRIPTION

EDDE 523 Practicum with Deaf/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.

Formerly: Receptive and expressive language capabilities of hearing impaired student. Designing, teaching, and post-testing unit of instruction for remediation of specific language errors.

Rationale: Course description needed updating to reflect course experience. Impact on other units. None. Financial impact: None.

Learner outcomes supported by this change: No learner outcomes are impacted by this change. Support for this change from assessment activities: No assessment activities conducted. This is a minor wording change to better reflect the course content

REVISE TO ADD RECOMMENDED BACKGROUND

EDDE 528 Curriculum Development Applied to Programs for Deaf/Hard of Hearing (3)
Recommended Background: A minimum intermediate level on the Sign Language Proficiency Interview or equivalent is required.

Formerly: No Recommended Background

EDDE 529 Teaching Reading, Writing, and Reasoning to D/HH (3)
Recommended Background: A minimum intermediate level on the Sign Language Proficiency Interview or equivalent is required.

Formerly: No Recommended Background

Rationale: For students to be successful in these classes, a minimum sign language proficiency level of intermediate is required. Track II students in the EDDE program are required to reach this proficiency level prior to their professional year and these courses; however, the revision clarifies for Track 1 students and online D/HH consortium students what is needed. Impact on other units: None. Financial Impact: None.

Leaner outcomes supported by this change: No learner outcomes are impacted by this change.
Support for this change from assessment activities: Instructors have observed that students below this proficiency level struggle to understand and participate in the course.

(ETEC) Educational Technology

ADD

ETEC 588 Effective use of Interactive Whiteboards (3) Classroom applications of interactive whiteboards to support information literacy and 21st century skills; designed to enable teachers to use and integrate an interactive whiteboard into the K-12 or post-secondary curriculum. Includes the design and development of lesson activities that facilitate learning through the development of interactive components.

Rationale: ETEC (Educational Technology) is a new program area. This course is a required course for the EDS in Teacher Education with a concentration in Educational Technology. The course has been offered as a TPTE 595 course in the past. Impact on other units: None. Format and location: Lecture on campus. Financial Impact: None. Current faculty already offer the course as a special topics course.

Learner outcomes supported by this change: No learner outcomes are impacted by this change.
Support for this change from assessment activities: Almost all classrooms in the schools that hire our students have interactive whiteboards resulting in a high demand for teachers to have the skill set needed to develop lessons using them.

II. PROGRAM CHANGES

DEPARTMENT OF CHILD AND FAMILY STUDIES

REVISE FOOTNOTE 3 - CHILD AND FAMILY STUDIES MAJOR, PHD

In the 2016-2017 Graduate Catalog, revise footnote 3 to read as follows:

[3]CFS 570 and a 600-level methods course selected from CFS 650, CFS 660, or SOCI 633.

Rationale: CFS 633 (Survey Design and Analysis) has not been taught in more than 6 years and has subsequently been removed from the catalog. Removal from the catalog has instigated the removal of CFS 633 from the CFS doctoral program. CFS 633 was cross-listed with SOCI 633 (Survey Design and Analysis), which is still taught in the Sociology Department. Because some of our doctoral

students pursue survey research for their dissertation, it is important that we retain an option for them to take an advanced survey design course. Thus, we are proposing to replace CFS 633 with SOCI 633 as one of the Research Methods courses that students can choose from. Impact on other units: We have contacted the Sociology Department and their faculty approved this change (see supporting email). We do not think this will have much impact on the Sociology Department, because CFS students have been taking SOCI 633 during the past 6 or more years when CFS 633 was not offered. Financial Impact: None.

Learning outcomes supported: Revision is not directly related to student learner outcomes.
Support from assessment activities: Faculty discerned that taking a survey research design course is an important option for CFS doctoral students who are pursuing this type of research for their dissertation.

DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

+ DROP UNIVERSITY RESEARCH ADMINISTRATION GRADUATE CERTIFICATE

In the 2016-2017 Graduate Catalog, drop the Graduate Certificate in University Research Administration.

Rationale: There is no apparent need for the certificate/program. Since the program was never implemented, dropping it will not affect anyone. Impact on other units: None. Financial Impact: None. Learner Outcomes: None. Support from assessment activities: Lack of demand. Per Dr. Albrecht this is a SUBSTANTIVE CHANGE.

REVISE REQUIREMENTS FOR EDUCATIONAL ADMINISTRATION (PREK-12) GRADUATE CERTIFICATE

In the 2016-2017 Graduate Catalog, revise the curriculum for the Ed Admin (Pre K-12) Graduate Certificate as follows:

The curriculum for the Educational Administration (PreK-12) certificate is – EDAM 583 (3 hours), EDAM 515 (3 hours), EDAM 552 (3 hours), EDAM 554 (3 hours), EDAM 548 (3 hours), EDAM 580 (3 hours), EDAM 519 (3 hours).

Rationale: Formerly EDAM 553, Strategic Planning. This course needed to change to meet new state licensure requirements for Principal Preparation. Format of Course: Regular full term course taught on line. Impact on other units: None. Financial Impact: None.

Learner Outcomes: This course supports SACS learner outcome # 1 in the EdS, MS, and PreK-12 Certificate programs.
Support from assessment activities: It is consonant with SACS student learner outcome about mastery of the core knowledge of Pre-K12 leadership field.

REVISE REQUIREMENTS – EDUCATIONAL ADMINISTRATION MAJOR, MS

In the 2016-2017 Graduate Catalog, revise the listing for Core requirements and Research as shown below:

Requirements	Hours Credit
Core Requirements (EDAM 513, EDAM 515, EDAM 548, EDAM 552)	12
Research (EDAM 520)	3

Rationale: Formerly EDAM 516, Research Methods. This course needed to change to meet new state licensure requirements for Principal Preparation. Format of Course: Regular full term course taught on line. Impact on other units: None. Financial Impact: None.

Learner Outcomes: This course supports SACS learner outcome # 1 for the EdS, MS, and PreK-12 Certificate programs.
Support from assessment activities: It is consonant with SACS student learner outcomes about mastery of the core knowledge of Pre-K12 leadership field.

REVISE REQUIREMENTS – EDUCATION MAJOR, EDS (EDUCATIONAL ADMINISTRATION CONCENTRATION)

In the 2016-2017 Graduate Catalog, delete current requirement listing and replace as follows (increases hours to 42):

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	9
(EDAM 520, [2]EDAM 592), [3]Electives: EDPY 577	
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.

Rationale: Formerly EDAM 516, Research Methods. This course needed to change to meet new state licensure requirements for Principal Preparation. Format of Course: Regular full term course taught on line. Impact on other units: None. Financial Impact: None.

Learner Outcomes: This course supports SACS learner outcome # 1 for the EdS, MS, and PreK-12 Certificate programs.
Support from assessment activities: It is consonant with SACS student learner outcomes about mastery of the core knowledge of Pre-K12 leadership field.

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELING

+ ADD CERTIFICATE – DEAFNESS REHABILITATION

In the 2016-2017 Graduate Catalog, add text and requirements for new certificate: Deafness Rehabilitation as follows:

Deafness Rehabilitation Graduate Certificate
The deafness rehabilitation certificate is a distance education program available to students whose career interests relate to working with individuals who are deaf or hard of hearing. This 12 credit-hour certificate is limited to those students who demonstrate at least an intermediate level of skill with the Sign Language Proficiency Inventory (SLPI) prior to admission to the certificate. Courses specific to the Graduate Certificate in Deafness Rehabilitation are taught via distance education and integrate American Sign Language (ASL) as the primary means of delivery of lecture material. Required courses are:

ASL 421 Deaf Culture (delivered through Department of Theory and Practice of Teacher Education)
RHCO 521: Rehabilitation Services in the Deaf Community
RHCO 522: Communication with Person who are Deaf or Hard of Hearing
RHCO 523: Special Populations and Topics in Deafness Rehabilitation

The four required courses of the Graduate Certificate in Deafness Rehabilitation will be taught during one semester. In that semester, students will be required to be present at the Knoxville campus for individualized instruction in counseling skill for approximately one week. Students may pursue the certificate independently or may complete it in addition to the Counseling Major, (MS), Rehabilitation Counseling concentration. The concentration will be offered periodically, according to volume of requests for admissions, external funding, and other considerations.

Program Contact: Ms. Lisa Rimmell, M.S., CRC., CI/CT, lrimmell@utk.edu

Rationale: There is such a need to educate persons for positions in Deafness Rehabilitation that the U.S. Department of Education, Rehabilitation Services Administration is providing training grants to universities to provide the necessary graduate training for the purpose of preparing students to become qualified as Rehabilitation Counselors working with specialty populations of individuals who are deaf or hard of hearing. The Rehabilitation Counseling concentration of the MS in Counseling degree at the University of Tennessee earned one of these grants, awarded during fall semester, 2014. Impact on Other Units: The Deaf Culture course will be taught through TPTE, through agreement with TPTE. Financial Impact: The 12-credit hour certificate will require that four additional courses be taught in two separate terms (thus twice) within the five-year grant cycle. The grant contains funding for one of the courses each time it is taught. The Departments (EPC and TPTE) will hire adjunct instructors to teach the others. As the certificate is taught through Distance Education, the UT Distance Education incentive times the conservative estimate of numbers of students completing the certificate (and the 48-hour Master's Degree in Rehabilitation Counseling, also funded by the grant) will more than cover the costs of hiring adjuncts to teach the graduate courses.

Learning Outcomes Supported: 1, 2, 3, 4, 5
Assessments of Need: Faculty review of community need; Federal grant opportunity.

DROP DEAFNESS REHABILITATION SPECIALIZATION FROM THE MS COUNSELING MAJOR

In the 2016-2017 Graduate Catalog, drop the Deafness Rehabilitation specialization and all related text from the Counseling Major, MS Degree.

Rationale: With the introduction of the certificate in Deafness Rehabilitation, the specialization is no longer needed. There are no students in the Specialization program now. Impact on Other Units: None. Financial Impacts: None. The specialization is underused. Yet, the Certificate that will replace it enables federal grant support, with very strong expectation of adequate use.

Learning Outcomes Supported: None.
Support from Assessment Activities: Faculty review of community need and student use.

➢ DROP CONCENTRATION – COUNSELING MAJOR, MS

Psychosocial Rehabilitation concentration

In the 2016-2017 Graduate Catalog, drop the Psychosocial Rehabilitation concentration and all related text from the MS Counseling Major.

Rationale: This concentration has not been used. It is redundant with the Rehabilitation Counseling Concentration (MS in Counseling – Rehabilitation Counseling Concentration). No need for both. Impact on Other Units: None. Financial Impact: None.

Learning Outcomes Supported: None.
Support from Assessment Activities: Faculty review.

REVISE REQUIREMENTS – COUNSELING MAJOR, MS (SCHOOL COUNSELING CONCETRATION)

In the 2016-2017 Graduate Catalog, remove current requirements and replace with the following (increases hours to 60):

Counseling Major, (MS) - School Counseling Concentration

The purpose of the school counseling concentration is to prepare students to become professional school counselors within preK-12 schools in Tennessee and most states. The school counseling concentration (60 hours) is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). Program goals are based on CACREP and American School Counselor Association (ASCA) Standards; we seek to prepare students in professional identity; knowledge, skills, and practice in the foundations of school counseling, and strong clinical instruction. We strive to foster professional school counselors who are open and self-aware, and who demonstrate commitment, respect, and integrity.

Applicants for degrees in this field must present satisfactory evidence of academic ability and adequacy of personal characteristics and goals as determined by professional recommendations, scores on the Graduate Record Examination, previous experience with children and youth, and responses to written and oral questions. Graduates will fulfill the license requirements for PreK-12 School Counseling in Tennessee and in most states of the United States although some states may have additional experience and testing requirements. Graduates can complete the program in two years and two summers.

The concentration requires 700-hours of fieldwork in a school site to prepare students for practice. Enrolled students complete a program that includes core courses, clinical courses, and electives. Those applicants who have not had teaching experience may be required to complete additional courses. The faculty provides a challenging and supportive learning community where students engage in a rigorous and highly experiential program of study.

Requirements

	Hours Credit
COUN 480, COUN 525, COUN 535, COUN 545, COUN 550, COUN 551, COUN 552, COUN 554, COUN 555, COUN 558 (6 hours), COUN 565, COUN 570,	39
SPED 570*, SPED 566*	6
SCHP 690	3
EDPY 550	3
Three electives as advised	9
Total hours required	60

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

Rationale: In order to maintain our accreditation from the Council for Accreditation of Counseling and Related Educational Programs (CACREP), we must move from 48 to 60 credit hours for the school counseling program (in CACREP 2016 standards, all such programs must be 60CR). This requires us to add four (4) courses to our existing requirements. New curriculum requirements will add to the training and preparation of our students. Impact on other units: Students will be required to take SPED 566 as part of their curriculum. We have already spoken to Dave Cihak, SPED coordinator, and the addition of these students will not be an undue burden. Other courses are taught within our department. Financial Impact: The financial impact should be minimal. Three of the four courses are existing courses already taught within COUN, SCHP, or SPED. The fourth course, a proposed new course in counseling children and adolescents, which will be taught during alternate summers, which should not cause a financial impact on the program or department.

Learning Outcomes Supported: The areas of study within the additional credit hours may increase student success in learning outcomes 1, 2, & 3.

Support from Assessment Activities: Faculty of the CACREP accredited Counselor Education Programs assigned a subcommittee to consider the needed change. This committee considered potential weaknesses of our School Counseling Concentration graduates, considering comments from exit interviews and from site supervisors. The committee then recommended the most economic course they saw to: meet the new requirement for accreditation and strengthen graduates for the needs of their workplaces. The full faculty of the CACREP accredited Counselor Education Programs discussed and approved the proposed changes.

REVISE REQUIREMENTS – ONLINE TEACHING AND LEARNING CERTIFICATE

In the 2016-2017 Graduate Catalog, revise the 4th bullet as follows:

- IT 573 or another course approved by the Certificate Coordinator. Students who can demonstrate advanced skills that meet or exceed the learning objectives of IT573 may replace the course with another as advised.

Rationale: Some students have entered the program with advanced media development skills beyond the student learning outcomes for IT573. In such cases we hope to further their learning in other areas. We ask that the student obtain approval from the Certificate Coordinator. Impact on Other Units: None. Financial Impact: No financial impact.

Learning Outcomes Supported: None.
Support from Assessment Activities: Since we began offering this graduate certificate in 2013, we have found that students who already have basic media development skills and do not need the content of IT573, yet are interested in obtaining the certificate because they do not have the knowledge or skills for the rest of the certificate requirements.

DEPARTMENT OF NUTRITION

REVISE REQUIREMENTS – NUTRITION MAJOR, MS (NON-THESIS OPTION; CELLULAR AND MOLECULAR CONCENTRATION)

In the 2016-2017 Graduate Catalog, revise the 4th bullet (removing course NUTR 547) as follows:

A culminating experience is required as approved by the student's committee (must register for at least 3 hours of NUTR 548 or NUTR 549).

Rationale: NUTR 547 was inadvertently included on this list of options but was not agreed upon by the faculty. This course number is not used for the culminating experience. Impact on other units: None. This is only a housekeeping change. Financial Impact: None. This change does not change the existing faculty load.

Learner Outcomes Supported: This change does not address a specific SLO.
Support from assessment activities: This change will clarify what course numbers may be used for the culminating experience.

DEPARTMENT OF PUBLIC HEALTH

ADD ACCELERATED MPH-DVM DUAL DEGREE PROGRAM

In the 2016-2017 Graduate Catalog, add the accelerated MPH-DVM Dual Program as follows:

Accelerated MPH-DVM Program
Students must be currently enrolled in the professional DVM degree program at the University of Tennessee (DVM students) to enter the dual DVM-MPH program; all requirements for both the DVM and MPH degrees must be met for admission. DVM students may enroll in the program at any time during years 1 - 3, but progress and time to completion will be affected by when a student starts the dual program and how many courses are satisfactorily completed each semester. Students will be expected to complete MPH-specific courses during the two summers following the first and second years of veterinary school. Students will pay graduate tuition fees during the summer semester and professional DVM tuition during the fall and spring semesters. Degrees do not need to be awarded simultaneously; if a student has not completed the requirements for the MPH, the student may still receive the DVM but must complete the MPH requirements within one year to take advantage of the shared credits. If a dual student completes the MPH requirements, but does not complete the DVM, the student may still be awarded the MPH.

All core courses for the MPH program and requirements for the DVM program must be completed. Dual DVM-MPH students must also complete CEM 611, CEM 506, and EITHER CEM 507 or CEM 508. An additional 4 elective credits approved by the advisor must also be completed.

Approved Dual Credit
Seven credits from the DVM program can be shared between the two degrees and applied to the MPH total credit count. These seven credits can be shared from any of the following courses: VMD833, VMD 836, VMD 836, VMD 864, VMD 867, or VMD 897. Eight credits from the MPH program can be shared between the two degrees and applied to the DVM total credit count as electives. These eight credits can be shared from any of the following courses: CEM 506, CEM 507, CEM 508, PUBH 587, or PUBH 588.

Rationale: Having a dual DVM-MPH option would make the University of Tennessee more competitive with other veterinary programs. Although the target number of veterinary students entering any given class is currently set at 85, graduate student numbers at the university have the potential to grow. This dual option would help increase graduate student numbers and advanced degrees awarded by the university. For students, such a program would be cost and time effective. Upon graduation, veterinarians average a debt load of $162,113 (American Veterinary Medical Association, 2013 figure). Oftentimes, this debt load dissuades students from pursuing graduate degrees, although their loans are deferred during all advanced training. By completing the dual DVM/MPH program, graduates would shorten the time required to achieve both degrees and be able to start earning earlier than if the degrees were pursued in succession. A recent AVMA report suggested a veterinary degree alone may not be a valuable return on investment, compared to a bachelor's degree. A dual DVM/MPH degree does increase the marketability of a graduate and opens the door to options outside of clinical practice including work with the government and non-profit organizations. The AVMA has also reported a need for veterinarians in the field of veterinary public health. By adding a dual degree, we expect more DVM students to enroll and complete an MPH while at UT.

A concern is the sharing of hours toward two separate degrees. Currently, students with a DVM who are also completing the MPH do not share any courses. The MPH degree requires 42 credits and the DVM requires 165 credits, which is far in excess of most master or doctoral credit requirements. This proposal recommends "sharing" of 15 credits between the two degrees and are described later; with shared credits, students would complete a total of 192 credits for both degrees. This proposal is similar to the already established JD/MPH program. As such, this request is not unique within the university system. Additionally, numerous veterinary colleges throughout the United States have dual DVM/MPH programs similar to this, and they have been approved by the Council on Education in Public Health, the accrediting body for MPH programs. These programs have a similar number of shared credits between the two programs. The VMD courses that would count toward the MPH are veterinary public health focused courses which focus on food hygiene and zoonoses, epidemiology, and infectious diseases among others.

Core requirements for both degrees (DVM and MPH) would not change. The concentration courses for the MPH would be the same as proposed for the stand alone MPH with a veterinary public health concentration. CEM 611 and CEM 506 would be required concentration courses. Students would be required to take either CEM 507 or CEM 508. Four additional elective credits approved by

the advisor would also be required. Seven credits from select VMD courses would be applied to the MPH total credit count. Eight credits from the MPH courses would be applied to the DVM total credit count as elective credit.

Impact on other units: None. Utilizes classes already in the graduate catalogue. Financial impact: None. Courses taught by existing faculty members within the Department of Public Health and the College of Veterinary Medicine. This proposal will also be submitted simultaneously by the College of Veterinary Medicine for approval.

Student learner objectives impacted: MPH Learner Objectives 1, 2, 3, and 4.

Support from assessment activities: Current students and alumni of the MPH Veterinary Public Health Concentration were polled and they expressed support for the proposed changes. Additionally, similar programs at other universities were reviewed for curriculum content.

REVISE REQUIREMENTS – PUBLIC HEALTH, MPH (VETERINARY PUBLIC HEALTH CONCENTRATION)

In the 2016-2017 Graduate Catalog, revise the requirements listed in footnote 2 for the Veterinary Public Health concentration as follows:

[2] Veterinary Public Health: Comparative and Experimental Medicine CEM 506, CEM 611, and either CEM 507 OR CEM 508.

Rationale: All core required courses would remain the same. Concentration courses will change as follows: CEM 611 and CEM 506 will be required concentration courses. Students will be required to take either CEM 507 or CEM 508. An additional 11 elective courses approved by the advisor would also be required.

For the first decade of the veterinary concentration of the MPH, required concentration courses were taken from existent courses in other degree programs including the DVM and MPH. Over time, it has become apparent that the required courses may not be the best in preparing veterinary public health practitioners for the workforce. The veterinary concentration requirements are being changed to better reflect the needs of an individual graduating with an MPH-VPH and address VPH core competencies. Although the number of required concentration credits will be reduced, a new course, CEM 506, will introduce and emphasize the various roles of a veterinary public health practitioner. This course will be taken early in the pursuit of the MPH. Students will then be able to tailor their degree to their specific interest within veterinary public health. Impact on other units: None. Financial impact: None. Courses taught by existing faculty members.

Student learner objectives impacted: MPH Learner Objectives 1, 2, 3, and 4.

Support from assessment activities:: Current students and alumni of the MPH Veterinary Public Health Concentration were polled and they expressed support for the proposed changes. Additionally, similar programs at other universities were reviewed for curriculum content.

REVISE REQUIREMENTS – PUBLIC HEALTH, DOCTOR OF PUBLIC HEALTH (DRPH)

In the 2016-2017 Graduate Catalog, revise Footnote 2, to remove course PUBH 612 and replace with course PUBH 613.

Rationale: One of the requirements for the DrPH program is the course "Public Health Ethics and Law," which was proposed as a new class for fall 2015 with the course number PUBH 612. But prior to CRC approval, it was discovered that the PUBH 612 course number was already in use for a cross-listed course titled "Health and Nursing Policy/Planning". "Public Health Ethics and Law" was then renumbered as PUBH 613. However, the DrPH description in the catalogue was not updated to show the new course number. The revision will correct the clerical error. Impact on other units: None. Financial impact: None.

Student learner objectives impacted: None. This changes a minor clerical error in course numbering.
Support from assessment activities: No assessments conducted. Change is a minor clerical error in course numbering.

REVISEREQUIREMENTS – PUBLIC HEALTH MAJOR, MPH

In the 2016-2017 Graduate Catalog, after the last footnote, add sentence (new paragraph) indicating the requirement of passing the MPH comp exam as follows:

Students are required to pass a MPH comprehensive exam.

Rationale: The comprehensive exam was already a requirement of the MPH program and has been for years. However, it was not included on the catalogue description. This change fixes this clerical error. Impact on other units: None. Financial impact: None. This changes a minor clerical error in the program description.

Student learner objectives impacted: None. This changes a minor clerical error in the program description.
Support from assessment activities: None needed.

REVISE REQUIREMENTS – DUAL JD/MPH PROGRAM

In the 2016-2017 Graduate Catalog, revise to add a 6th bullet indicating the requirement of passing the MPH comp exam as follows:

- Students are required to pass a MPH comprehensive exam.

Rationale: The comprehensive fulfills a requirement for the completion of the MPH program and would also apply to the dual program. However, it was erroneously left out the dual's catalogue description. This change fixes this clerical error. Impact on other units: The College of Law has been notified of this update and will be submitting the same change request. Financial impact: None. This changes a minor clerical error in the program description.

Student learner objectives impacted: None. This changes a minor clerical error in the program description.
Support from assessment activities: None needed.

REVISE REQUIREMENTS – DUAL JD/MPH PROGRAM

In the 2016-2017 Graduate Catalog, revise the requirements as follows:
under "first year" - revise the hours on LAW 808 from 3 to 2 and add 2 courses to list Law 811 (1) and Law 820 (1)
under "Third Year" - add PUBH 588
this revision will revise the total hours from 111 to 115.

Rationale: The MPH program is a 42 credit hour program. One of the requirements for the degree is the completion of PUBH 588, which is listed in the last bulleted sentence under "requirements" in the graduate catalogue description of the JD/MPH degree. However, further down in the listing, the course was left out of the list of required courses to be taken during the student's third year, leaving students with only 39 credit hours. PUBH 588 needs to be added to the list of third year courses. This was always the intended course sequence for JD/MPH students, but was left off of the original documentation due to a clerical error. Also, course revisions recently made by the College of Law have been incorporated in the showcase (year 1). Impact on other units: None. Financial impact: None. This changes a minor clerical error in the program description.

Student learner objectives impacted: None. This changes a minor clerical error in the program description.
Support from assessment activities: Reviewers from our accrediting body pointed out that, as currently listed, the program appears to be short 3 credit hours. Further review identified that the issue lay with a required course mistakenly left out of the list of required third year courses due to a clerical error.

DEPARTMENT OF THEORY AND PRACTICE IN TEACHER EDUCATION

REVISE EDUCATION MAJOR, PHD, (LITERACY STUDIES CONCENTRATION)

In the 2016-2017 Graduate Catalog, revise the Literacy Studies concentration by dropping the reading specialization and adding the Literacy Education specialization.

Rationale: In the past ten years the field formerly known as Reading Education has been renamed by both its major research body (the National Reading Conference changed to Literacy Research Association) and its major practitioner/research dissemination organization (the International Reading Association renamed as the International Literacy Association). In order to reflect the field, contemporary job market, and constituent parts of the concentration, which include aspects of children and young adult literature and ESL/world language education, the name Literacy Education better suits this concentration. Impact on other units: Only the concentration name will be changed. All courses and course prefixes will remain the same. There is no impact on other academic units. Financial impact: none.

Learner outcomes supported by this change: No learner outcomes are impacted by this change.
Support for this change from assessment activities: No assessment activities conducted. This is a minor wording change to better reflect the concentration content.

- **DROP CONCENTRATION – TEACHER EDUCATION MAJOR, MS (NON-LICENSURE TRACK 1)**

  Reading Education concentration

Rationale: In the past ten years the field formerly known as Reading Education has been renamed by both its major research body (the National Reading Conference changed to Literacy Research Association) and its major practitioner/research dissemination organization (the International Reading Association renamed as the International Literacy Association). In order to reflect the field, contemporary job market, and constituent parts of the concentration, which include aspects of children and young adult literature and ESL/world language education, the name Literacy Education better suits this concentration. Impact on other units: Only the concentration name will be changed. All courses and course prefixes will remain the same. There is no impact on other academic units. Financial impact: none.

Learner outcomes supported by this change: No learner outcomes are impacted by this change.
Support for this change from assessment activities: No assessment activities conducted. This is a minor wording change to better reflect the concentration content.

- **ADD CONCENTRATION – TEACHER EDUCATION MAJOR, MS (NON-LICENSURE TRACK 1)**

  Literacy Education concentration

In the 2016-2017 Graduate Catalog, add Literacy Education concentration to the Teacher Education Major, MS, Non-Licensure Track 1 as follows (replace Literacy Education for the dropped Reading Education).

Rationale: In the past ten years the field formerly known as Reading Education has been renamed by both its major research body (the National Reading Conference changed to Literacy Research Association) and its major practitioner/research dissemination organization (the International Reading Association renamed as the International Literacy Association). In order to reflect the field,

contemporary job market, and constituent parts of the concentration, which include aspects of children and young adult literature and ESL/world language education, the name Literacy Education better suits this concentration. Impact on other units: Only the concentration name will be changed. All courses and course prefixes will remain the same. There is no impact on other academic units. Financial impact: none.

Learner outcomes supported by this change: No learner outcomes are impacted by this change.
Support for this change from assessment activities: No assessment activities conducted. This is a minor wording change to better reflect the concentration content.

REVISE CATALOG TEXT, TEACHER EDUCATION MAJOR, MS, NON-LICENSURE TRACK

In the 2016-2017 Graduate Catalog, revise first paragraph under the Non-Licensure Track 1 heading, as follows:

Non-Licensure Track 1 concentrations are art education; education of the deaf and hard of hearing; elementary education; English education; literacy education; mathematics education; science education; science education (informal education); science, technology, engineering, and mathematics; social science education; special education; teaching and learning and world language/ESL education.

Rationale: In the past ten years the field formerly known as Reading Education has been renamed by both its major research body (the National Reading Conference changed to Literacy Research Association) and its major practitioner/research dissemination organization (the International Reading Association renamed as the International Literacy Association). In order to reflect the field, contemporary job market, and constituent parts of the concentration, which include aspects of children and young adult literature and ESL/world language education, the name Literacy Education better suits this concentration. Impact on other units: Only the concentration name will be changed. All courses and course prefixes will remain the same. There is no impact on other academic units. Financial impact: none.

Learner outcomes supported by this change: No learner outcomes are impacted by this change.
Support for this change from assessment activities: No assessment activities conducted. This is a minor wording change to better reflect the concentration content.

REVISE REQUIREMENTS – TEACHER EDUCATION MAJOR, MS, LICENSURE TRACK 2: INITIAL LICENSURE PROGRAM (SPECIAL EDUCATION CONCENTRATION)

In the 2016-2017 Graduate Catalog, revise the requirements for Special Education concentration by deleting course SPED 557 and replacing it with SPED 556.

Rationale: The Tennessee Department of Education has changed special education teacher licensure standards to reflect knowledge and skills related to teaching students with emotional and behavioral disorders. This proposed change will align the program with the new licensure standards. Impact on other units: This proposed change does not impact other units since the licensure standards apply to special education only. Additionally, the SPED 557 - Classroom Management course is not a required course by other programs or academic units. Financial Impact: There is no financial impact. SPED 556 - Methods of Teaching Students with Emotional and Behavioral Disorders has already been offered for the past several years.

Learner outcomes supported by this change: No learner outcomes are impacted by this change.
Support for this change from assessment activities: No assessments done; this change is necessary to comply with state licensure requirements.

- **DROP CONCENTRATION – TEACHER EDUCATION MAJOR, EDS**

  Reading Education concentration

- **ADD CONCENTRATION – TEACHER EDUCATION MAJOR, EDS**

  Literacy Education concentration

REVISE DESCRIPTION – TEACHER EDUCATION MAJOR, EDS

In the 2016-2017 Graduate Catalog, revise the first paragraph to reflect the name change of the concentration (from reading education to literacy education).

Rationale: In the past ten years the field formerly known as Reading Education has been renamed by both its major research body (the National Reading Conference changed to Literacy Research Association) and its major practitioner/research dissemination organization (the International Reading Association renamed as the International Literacy Association). In order to reflect the field, contemporary job market, and constituent parts of the concentration, which include aspects of children and young adult literature and ESL/world language education, the name Literacy Education better suits this concentration. Impact on other units: Only the concentration name will be changed. All courses and course prefixes will remain the same. There is no impact on other academic units. Financial impact: none.

Learner outcomes supported by this change: No learner outcomes are impacted by this change.
Support for this change from assessment activities: No assessment activities conducted. This is a minor wording change to better reflect the concentration content.

REVISE INTRODUCTORY COLLEGE TEXT TO REFLECT THE NAME CHANGE IN CONCENTRATIONS

In the 2016-2017 Graduate Catalog, under the Education major heading, revise the first paragraph to reflect the name change of the concentration (from reading education to literacy education). Remove the dropped reading education concentration and replace with literacy education.

Rationale: In the past ten years the field formerly known as Reading Education has been renamed by both its major research body (the National Reading Conference changed to Literacy Research Association) and its major practitioner/research dissemination organization (the International Reading Association renamed as the International Literacy Association). In order to reflect the field, contemporary job market, and constituent parts of the concentration, which include aspects of children and young adult literature and ESL/world language education, the name Literacy Education better suits this concentration. Impact on other units: All courses and course prefixes will remain the same. There is no impact on other academic units. Financial impact: none.

Learner outcomes supported by this change: No learner outcomes are impacted by this change.
Support for this change from assessment activities: No assessment activities conducted. This is a minor wording change to better reflect the concentration content.

COLLEGE OF ENGINEERING

All changes effective Fall 2016.

I.COURSE CHANGES

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

(CE) Civil Engineering

ADD

CE 671 Behavior of Bridges and Buildings (3) Behavior, analysis and design of decks, girders, columns, and composite members subjected to static and dynamic loading.
(DE) Prerequisite(s): 571 and 573.
Registration Restriction(s): Minimum student level – graduate.

Rationale: The program in structures has at its base a need to understand the structural system that comprises a bridge or building and how we can enhance the efficiency and economy of bridges and buildings through the better understanding of existing techniques and the development of new approaches to the design of these structural systems. The need for more efficient structures is ongoing, and the approaches to creating these will only come about from designers who have a deeper than typical understanding of how these systems actually work and are open to innovative new ways to approach their design. This course attempts to satisfy those needs. It will go beyond the typical design course and build on what was learned in the typical design courses; hence it qualifies to be labeled as a 600-level class. Impact on other units: None. Financial impact: None.

(ENVE) Environmental Engineering

ADD

ENVE 531 Hydrology (3) The hydrologic cycle and key physical processes defined; i.e., rainfall-runoff relationships, evapotranspiration, infiltration and groundwater. Concepts introduced include unit hydrograph, statistics, design storms, and flow routing fundamentals. Advanced tools for hydrological measurement, data acquisition, analysis and interpretation; and applications for water resources management are discussed.
Recommended background: Civil Engineering 391.

ENVE 533 Green Infrastructure Design (3) Modification of hydrologic methods for urban systems, urban pollutants of concern, stormwater regulations, low impact development, green infrastructure, design of stormwater control measures, and discussions of stormwater control performance. Class projects will be design focused, offer real world challenges, and require the application of a diverse set of methods and tools.
Recommended Background: 531.

Rationale: The proposed added graduate and undergraduate courses in water resources engineering curriculum are necessary to address current student needs, offer more technical courses for undergraduate/graduate students, and align courses with faculty areas of expertise and interest. Impact on other units: No negative impact. Some of the proposed courses might be of interest for graduate students from other colleges. Financial impact: None.

REVISE DESCRIPTION AND RECOMMENDED BACKGROUND

ENVE 530 Urban Hydrology and Stormwater Engineering (3) Understanding modifications to the hydrological cycle due to urbanization and urban pollutants of concern. Topics include stormwater regulations and applications for design of stormwater control measures (SCMs) with an emphasis on advanced hydrologic/hydraulic watershed modeling.
Recommended Background: Civil Engineering 391.

Formerly: Modification of hydrologic methods for urban systems, urban pollutants of concern, stormwater regulations, low impact development, green infrastructure, design of stormwater controls (Best Management Practices, BMPs), and discussions of stormwater control performance. Class projects will be design focused, offer real world challenges, and require the application of a diverse set of methods and tools.
Recommended Background: Hydraulics and Hydrology.

REVISE DESCRIPTION AND RECOMMENDED BACKGROUND, ADD REGISTRATION RESTRICTION

ENVE 532 Statistical Methods in Water Resources (3) Advanced hydrologic analysis through the use of statistical methods. Course will focus on applying statistical techniques to support research, including parametric and nonparametric hypothesis testing; logistic regression; multivariate analysis; validation statistics and uncertainty analysis, and time series analysis.
Registration Restriction(s): Minimum student level – graduate.
Recommended Background: Civil Engineering 493; Statistics 251 and 537.

Formerly: Advanced hydrologic analysis through the use of statistical methods. Course will focus on applying statistical techniques to support research hypothesis. Topics include: data collection and uncertainty; hypothesis testing; regression (stepwise and partial least squares); non-parametric (kernel density estimator); multivariate (principal components analysis, cluster analysis and singular value

decomposition); validation statistics.
Recommended Background: Civil Engineering 494; Statistics 251.
Comment(s): Students not meeting Recommended Background may seek consent of instructor.

Rationale: Course revisions are necessary in view of revised graduate curriculum. Impact on other units: None. Financial impact: None.

(ECE) Electrical and Computer Engineering

REVISE TO DROP (RE) PREREQUISITE

ECE 555 Embedded Systems (3)

Formerly: (RE) Prerequisite(s): *455*

Rationale: *455/555* Embedded Systems Design are taught with shared lectures, but *555* erroneously lists *455* as a prerequisite. Removing this will eliminate the need to fill out a prerequisite waiver for every graduate student enrolled. Impact on other units: None. Financial impact: None.

DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

(ENMG) Engineering Management

ADD

ENMG 601 Systems Theory and Engineering (3) Technology course that will examine theoretical foundations of General System Theory applied to engineering and organizational enterprises addressing issues concerning systems, the effectiveness of organizations in the context of traditional management related issues, as well as incorporating the critical impact of systems thinking on the socio-technical environment. Among the topics to be covered in the course are: the meaning of General Systems Theory (GST); GST and the unity of science; the concept of Equifinality; the characteristics and modeling of open systems; the concepts of the Learning Organization; the principle of Leverage; building Learning Organizations; and issues related to Socio-Technical Systems. Systems Engineering focuses on defining customer needs and required functionality early in the development cycle, documenting requirements, then proceeding with design synthesis and system validation while considering the complete problem including operations, performance, test, manufacturing, cost, and schedule. This subject emphasizes the links of systems engineering to fundamentals of decision theory, statistics, and optimization.
(RE) Prerequisite(s): 533.
Registration Restriction(s): Minimum student level – graduate.

Rationale: The educational objectives of this course are to present engineering and management of technology students with the major concepts and techniques involved in general system theory and systems engineering applied to the management of technology. This course is designed to satisfy a current student need and prepare them to think and evaluate the critical issues involved in systems and their management from an engineering point of view. This new course will support the Engineering concentration at the Ph.D. level. Current faculty are adequate to teach the added course. Impact on other units: None. Financial Impact: None.

(IE) Industrial Engineering

REVISE TITLE

IE 603 Advanced Design and Analysis of Experiments (3)

Formerly: Design and Analysis of Industrial Experiments (3)

Rationale: This title is more consistent with the content of the course than the current one. Design of experiments covered in the course goes beyond industrial experiments. This course is an advanced Ph.D. level course focusing on linear models and orthogonal arrays. Impact on other courses: None. Financial Impact: None.

DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

(MSE) Materials Science and Engineering

ADD 400 LEVEL COURSE FOR GRADUATE CREDIT

MSE 450 Introduction to Nuclear Fuels and Materials (3) Introduction to nuclear fuels and materials in light water reactors, with a focus on the effect of irradiation on properties and performance.
(RE) Prerequisite(s): Mechanical Engineering 331 or Materials Science and Engineering 260;
(RE) Corequisite(s): 201; and Mechanical Engineering 321 or Materials Science and Engineering 302.

Rationale: This is course cross-listed to Nuclear Engineering 440. In Nuclear Engineering Department, NE 440 is counted for graduate credit. A request to add MSE 450 for graduate credit will promote collaborative efforts amongst faculty and graduate students in these two departments. Impact on other units: None. Financial impact: None.

REVISE TITLE AND DESCRIPTION

MSE 644 Optoelectronic Processes in Semiconducting Materials and Devices (3) Focuses on optoelectronic processes involved in semiconducting materials and devices. The semiconducting materials include direct and in-direct bandgap materials. The devices primarily consist of light-emitting diodes, solar cells, and laser diodes. The fundamental processes will focus on 1) optical and electronic properties of semiconducting materials, 2) principle, design and characterization of optoelectronic devices, and 3) applications of laser spectroscopy in semiconducting materials. Will include lectures, experimental demonstrations, focused discussions, and presentations.

Formerly: Optoelectronic Processes in Polymeric Materials (3) Introduces fundamental molecular orbital and energy band theories and discusses (1) optical and electronic properties of polymeric materials, (2) principles, design and characterization of polymer optoelectronic devices, and (3) applications of laser spectroscopy in polymer characterizations. The focus is to understand electron related processes and optoelectronic characterizations of polymeric materials and devices. The fundamentals of laser spectroscopy are also explained in determining structure-property relationships in polymer research.

Rationale: The area of study, i.e., optoelectronics, has developed dramatically in the past decades. The extension of the scope of this course will cover the state-of-the-art research topics and industrial applications. Impact on other units: None. Financial impact: None.

DEPARTMENT OF MECHANICAL, AEROSPACE, AND BIOMEDICAL ENGINEERING

(BME) Biomedical Engineering

ADD

BME 505 All Things Carbon (3) Carbon is the basis of life; as such biomedical engineering students have the ability to study this element along with associated biological applications. Diamond-like carbon has potential as a coating for orthopedic implants. Nano-crystalline diamond can be used as a biosensor. Carbon nanotubes have applications in pharmacy and medicine due to their large surface area. Carbon is a suitable coating for magnetic nanoparticles, which can be used for hyperthermia and magnetic resonance imaging. In summary, the ability of carbon to enhance medical diagnostics and treatment is wide-ranging and not fully exploited. Students will learn current applications of carbon in medicine and be able to project future uses once this course is completed.

BME 575 Luminescent Materials for Theranostics (3) Luminescent materials are crucial for diagnostic imaging. Scintillators and storage phosphors are used in x-ray imaging, computed tomography, single photon emission computed tomography, and positron emission tomography. Luminescent nanoparticles can be used for in-vivo diagnostics such as visualization of tumor margins. The first part of the course will focus on basic mechanisms of luminescence such as radiation absorption and emission, energy level diagrams, and selection rules. The second part will focus on the properties and applications of luminescent materials such as thermoluminescence, afterglow, upconversion, x-ray phosphor and scintillator materials, integrating and counting techniques as well as the above-mentioned imaging modalities.
Recommended Background: Physics 411 or some basic quantum mechanics.

BME 678 Magnetic Nanoparticles – From Fabrication to Clinical Applications (3) Magnetic nanoparticles have a wide and varied use in medicine. They can be used in magnetic separation, molecular carriers for gene separation, drug delivery or drug carriers, and hyperthermia treatment and as an enhancer for magnetic resonance imaging. The course addresses synthesis, properties and characterization of the nanoparticles as well as optional functionalization and applications, in particular pertaining to cancer therapy, toxin removal, imaging, lab-on-a-chip and thrombosis.
(DE) Prerequisite(s): 578; Materials Science and Engineering 567.
Registration Restriction(s): Minimum student level – graduate.

BME 679 Mechanics for Dental Materials (3) Dental Materials have some of the most exacting and varied requirements for mechanical strength. Uses of dental materials include fillings, crowns, bridges, implants, root canals, impressions and many others. The course will cover mechanical testing, such as deformation, strength testing, impact and creep; rheology, such as elasticity, flow and fillers; surfaces – wetting, bonding, adhesives and etching; Corrosion – basic considerations, passive metals and deliberate corrosion; casting – dimensional considerations and defects. There will also be a modeling component.
(DE) Prerequisite(s): Mechanical Engineering 524, 530, or 559.
Registration Restriction(s): Minimum student level – graduate.

Rationale: The biomedical engineering graduate program is being coordinated by the recently established Institute for Biomedical Engineering. We seek to enhance the program's interdisciplinary aspects by making use of interest and expertise in key relevant areas outside of the Knoxville campus, in particular satellite campus at the University of Tennessee Space Institute, also known as UTSI. The courses listed above comprise the new BME courses delivered from UTSI. Each of these courses will involve an inverted classroom model where most lecture material is delivered online by pre-recorded videos. All courses listed above have been previously taught as special topics courses by existing faculty at UTSI. Unfortunately, students on this campus have been limited in their course selection and further constrained by the graduate school restrictions on the number of credit hours for special topics courses to adequately progress through their graduate program. Therefore, this situation provides additional justification to add these courses to the curriculum. Impact on other units: None. Financial impact: None.

(ME) Mechanical Engineering

REVISE TITLE, DESCRIPTION

ME 511 Fundamentals of Heat Conduction (3) Physical and mathematical formulations for Fourier heat conduction problems for lumped systems, transient and steady-state distributed systems. Solutions by separation of variables, generalized integral transforms (Fourier and Laplace) for finite and infinite domains, Green's function method, and perturbation methods for nonlinear systems.
Recommended Background: Undergraduate heat transfer course.

Formerly: Heat Transfer I (3) Properties of radiating surfaces. Diffuse, specular and directional interchange for gray and nongray surfaces. Interaction with other heat transfer modes. Analysis of steady-state and time-dependent with other heat transfer modes. Analysis of steady-state and time-dependent heat conduction by analytical methods.
Recommended Background: Undergraduate heat transfer course.

REVISE TITLE AND DESCRIPTION. DROP (DE) PREREQUISITE AND ADD RECOMMENDED BACKGROUND

ME 512 Convection Heat Transfer (3) Models and equations for fluid motion, the general energy equation, and transport properties. Exact, approximate, and boundary layer solutions for laminar flow heat transfer problems. Heat transfer in internal and external forced and buoyancy driven flows. Application of similarity concepts and analogies to convection heat transfer.
Recommended Background: Undergraduate heat transfer course.

Formerly: Heat Transfer II (3) Analysis of steady-state and time-dependent heat conduction by numerical methods. Analysis of laminar and turbulent convection heat transfer in internal and external flows, forced and buoyancy driven flows.
(DE) Prerequisite(s): 541.

Rationale: Redistributes material from two courses into more appropriate formats. Impact on other units: None. Financial Impact: None.

DEPARTMENT OF NUCLEAR ENGINEERING

(NE) Nuclear Engineering

REVISE HOURS, DESCRIPTION, AND (RE) COREQUISITE(S)

NE 401 Radiological Engineering Laboratory (4) Physics and electronics associated with radiation detection and measurement. Concepts covered include radiation interactions and signal formation in different detector types, radiation counting and spectroscopy, nuclear instrumentation, applications of radiation detection systems, and statistical methods of data analysis.
(RE) Corequisite(s): Electrical and Computer Engineering 301, Mathematics 241 or 247.

Formerly: Radiological Engineering Laboratory (3) Radiation sources, detector types, radiation counting and spectroscopy, analog and digital electronics for detectors.
(RE) Corequisite(s): 470.

Rationale: This course is composed of three hours of lecture and three hours of laboratory each week. Courses of this format have been identified to have three credit hours for in-class contact hours (3) and one credit hour for laboratory contact hours (3) for a total of four (4) credit hours. Impact on other units: None. Financial impact: None.

REVISE DESCRIPTION, AND ADD CREDIT RESTRICTION

NE 433 Principles of Health Physics (3) Radiation quantities, limits and risk assessment, external and internal dosimetry, biological effects of radiation, radiation detection, radiation interactions and decay, applications. Graduate students taking the course will perform advanced calculations related to radiation protection and dosimetry in addition to the material described above.
Credit Restriction: Students who have received credit for 233 may not receive credit for 433.

Formerly: Principles of Health Physics (3) Radiation quantities, limits and risk assessment, external and internal dosimetry, biological effects of radiation, radiation detection, radiation interactions and decay, applications.

Rationale: Since students are allowed to take 433 for graduate credit, it is important to differentiate the course requirements when taking the course for graduate credit. In the future 433 will be used as a course for non-NE majors beginning graduate studies. The overlap of course material with 233 is too close to allow a student to receive credit for both courses. Impact on other units: None. Financial Impact: None.

REVISE HOURS, DESCRIPTION, ADD CREDIT RESTRICTION (PRIMARY COURSE) (SECONDARY IS CHEM 581)

NE 550 Radiation Measurements Laboratory (4) Physics and electronics associated with radiation detection and measurement. Concepts covered include radiation interactions and signal formation in different detector types, radiation counting and spectroscopy, nuclear instrumentation, applications of radiation detection systems, and statistical methods of data analysis.
Credit Restriction: Students cannot receive credit for both 401 and 550.

Formerly: Radiation Measurements Laboratory (3) Physics and electronics associated with radiation detection and measurement, methods of data analysis. Application of detector measurements and fundamentals of radiation detection instrumentation operation in the context of detecting, identifying, and quantifying radioactive materials. Use of radiation detection systems in process monitoring and safeguards systems, and in monitoring for security applications.

Rationale: The catalog description is being changed to more adequately reflect the topics covered in the course. A lecture component of this introductory graduate level course will be combined with 401, which will have the same catalog description. The laboratory section of this course will be different from the undergraduate version, which provides the necessary rigor for graduate credit. To properly account for the estimated number of hours graduate students will spend on the course, an additional hour is being added to reflect the class and laboratory components of the class. Impact on other units: None. Financial Impact: None.

II. PROGRAM CHANGES

REVISE RELIABILITY AND MAINTAINABILITY ENGINEERING MAJOR, MS

In the 2015-16 Graduate Catalog, revise courses as follows:

1. First section, insert MSE 483 as a RME Core Course
2. Second section, remove STAT 560 and insert IE 516
3. Third section, remove IE 516; insert MSE 421, NE 441

Rationale: The Department of Materials Science and Engineering has proposed to have Industrial Engineering 483 co-listed as Materials Science and Engineering 483. The BAS department plans to discontinue Statistics 560 – Introduction to Mathematical Statistics because of a retirement. Industrial Engineering 516 – Statistical Methods in Industrial Engineering covers similar materials. Materials Science and Engineering 421 – Mechanical Behavior of Materials II is added due to its relevance and for encouraging Materials Science and Engineering students to participate in the program. Nuclear Engineering 441 - Corrosion in Nuclear Power Systems is added as an elective because of its relevance to the Reliability and Maintainability Engineering program. Impact on other units: none. Financial Impact: none.

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

+ ADD GRADUATE CERTIFICATE: CONTRACTUAL AND LEGAL AFFAIRS IN ENGINEERING AND CONSTRUCTION

In the 2015-2016 Graduate Catalog, add heading and text for new certificate.

Contractual and Legal Affairs in Engineering and Construction Graduate Certificate
The graduate certificate in Contractual and Legal Affairs in Engineering and Construction is designed to (1) provide engineers and others who have a background in construction with a background in law, focusing on contract law, and (2) provide lawyers with a background in construction and engineering. Both of these fields have substantial overlap starting in the planning and contracting stages, continuing through project implementation and contract administration, and sometimes ending in formal dispute resolution proceedings. In such an environment, a broad range of knowledge in both fields is not only desirable; it may be critical to a firm or project's success.

Application and Admission
The following four types of students are expected to participate in the certificate program: (i) law students with an interest in construction law, (ii) engineering students pursuing a doctorate degree (doctoral candidates), (iii) engineering students pursuing a master's degree (master's candidates), and (iv) students with a B.S. who are pursuing only the law and engineering certificate ("certificate candidates"). To this effect, applicants must meet the minimum admission requirements and be admitted to the University of Tennessee, Knoxville, Graduate School. The only academic prerequisite for the certificate program is a bachelor's degree from a regionally accredited university or college. The College of Law stipulates that law students seeking to pursue the Certificate must first obtain the approval of the Dean or the Dean's Designee.

Learning Outcomes
1) Students will be proficient in structuring basic construction contracts.
2) Students will attain knowledge sufficient to anticipate and respond to potential legal issues likely to arise in construction projects.
3) Students will attain knowledge sufficient to effectively participate in planning construction projects from contractual and legal perspectives.
4) Students will develop the skills needed to understand and solve various issues and matters causing and/or triggering conflicts, claims, and disputes in engineering and construction.
5) Students will acquire the knowledge associated with the different construction dispute mechanisms.
6) The certificate will help create a group of well-rounded professionals who bridge between the engineering and legal domains.

Curriculum
Completion of the certificate is obtained through completion of the following primary and secondary courses representing a total of 15 credit hours (after the prerequisite courses are satisfied):

Prerequisite courses:	CE 340 Construction Engineering and Management I (3), Law 842 Contract Drafting Seminar (2)
Primary courses:	CE 584 Construction Conflicts, Claims, and Disputes (3), Law 994 Independent Study (Capstone) (3), Law 944 Construction Law (3),
Secondary courses:	one of: CE 581 Construction Estimating (3), **or** CE 582 Construction Scheduling (3);
and one of the following:	Law 821 Administrative Law (3), Law 896 Law of the Workplace (3), Law 914 Alternative Dispute Resolution (3), Law 926 Negotiation (3), Law 943 Land Use Law (3), Law 981 Business Torts (3), Law 990 Issues in the Law (Arbitration)(3)

Rationale: This certificate is proposed following discussion with Law faculty; both Colleges agree to limit the number of certificate students to only five at the initial stage of offering. There are several potential benefits for CEE in establishing the certificate. It will hopefully attract a few new applicants. It will also better prepare students for a career in construction law. In addition, students who acquire the certificate will potentially be able to market themselves more effectively to potential employers. Our students will gain a greater perspective by taking classes with Law students and individuals currently working in the construction field. Establishing this type of interdisciplinary program will help the CEE develop better ties with other colleges with the University. Finally, establishing the certificate would supplement enrollment. Financial Impact: None. Impact on other Units: College of Law has partnered in offering this certificate.

DEPARTMENTAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

REVISE REQUIREMENTS – COMPUTER ENGINEERING MAJOR, PHD

In the 2015-2016 Graduate Catalog, under requirements heading, revise second paragraph to remove item (a). Item b will now become (a) and item c will now become (b).

Rationale: "Areas of focus" are not formally defined. Removing this statement will eliminate confusion on what courses qualify as outside the focus area. Faculty are encouraged to continue promoting diverse coursework for PhD students. Impact on other units: None. Financial impact: None.

- **DROP CONCENTRATIONS – COMPUTER ENGINEERING MAJOR, MS AND PHD**

  Data Fusion concentration
  Data Structures concentration
  Data Visualization concentration

- **ADD CONCENTRATIONS – COMPUTER ENGINEERING MAJOR, MS AND PHD**

  Cybersecurity concentration
  Data Analytics

Rationale: Listed areas of concentration are out-of-date, consisting of both areas with no current faculty or ongoing research, as well as areas with these which are not listed. This update removes those which are no longer in use, and adds additional concentration areas which have current ongoing research. Impact on other units: None. Financial impact: None.

REVISE REQUIREMENTS – COMPUTER SCIENCE MAJOR, PHD

In the 2015-2016 Graduate Catalog, under Requirements heading revise 2nd paragraph, item (a.) as follows:

a) A minimum of 6 hours of course work must be COSC <u>or ECE</u> courses numbered at the 600-level.

Rationale: For many students, ECE courses at the 600-level may be equally relevant to the focus of their study. Impact on other units: None. Financial impact: None.

- **ADD CONCENTRATIONS – COMPUTER SCIENCE MAJOR, <u>MS AND PHD</u>**

  Computational Imaging concentration
  Computer-Human Interaction concentration
  Cybersecurity concentration
  Cyberinfrastructure concentration
  Data Mining concentration
  Data Analytics concentration
  Data Visualization concentration
  Discrete Optimization concentration
  High Performance Computing concentration

Intelligent Systems and Machine Learning concentration
Life Science Applications concentration
Software Systems concentration

In the 2015-2016 Graduate Catalog, add the following concentrations to the computer science major for both the MS and PhD:

Rationale: Previously, Computer Science had no concentrations listed other than the Bredesen Center program. This update adds concentration areas corresponding to ongoing research to help students and applicants better understand the areas of ongoing research in the department. Impact on other units: None. Financial impact: None.

REVISE REQUIREMENTS FOR ELECTRICAL ENGINEERING MAJOR, PHD

In the 2015-2016 Graduate Catalog, under requirements heading, revise second paragraph to remove item (a). Item b will now become (a) and item c will now become (b).

Rationale: "Areas of focus" are not formally defined. Removing this statement will eliminate confusion on what courses qualify as outside the focus area. Faculty are encouraged to continue promoting diverse coursework for PhD students. Impact on other units: none. Financial impact: None.

- **DROP CONCENTRATIONS – ELECTRICAL ENGINEERING MAJOR, MS AND PHD**

Circuit Theory concentration
Communication Theory concentration
Computers concentration
Electro-optics concentration
Electromagnetic Theory concentration
Plasma Engineering concentration

- **ADD CONCENTRATIONS – ELECTRICAL ENGINEERING MAJOR, MS AND PHD**

Automotive Manufacturing and Technology concentration
Communications concentration
Electromagnetics and RF Circuits concentration
Fire Protection Engineering concentration

In the 2015-2016 Graduate Catalog, drop and add concentrations as referenced above.

Rationale: Listed areas of concentration are out-of-date, consisting of both areas with no current faculty or ongoing research, as well as areas with these which are not listed. This update removes those which are no longer in use, and adds additional concentration areas which have current ongoing research. Impact on other units: None. Financial impact: None.

DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING

REVISE REQUIREMENTS – RELIABILITY AND MAINTAINABILITY ENGINEERING GRADUATE CERTIFICATE

In the 2015-16 Graduate Catalog, under each concentration for the Reliability and Maintainability Engineering Graduate Certificate, replace the third paragraph as follows:

Reliability and Maintainability Engineering Graduate Certificate – Chemical Engineering concentration

Currently, the available elective courses are CBE 585 / NE 585, ECE 504, IE 516, IE 517, IE 522, ME 534, MSE 421, NE 441, NE 575, NE 579, NE 585, and STAT 567.

Reliability and Maintainability Engineering Graduate Certificate – Computer Engineering concentration

Currently, the available elective courses are CBE 585/ NE 585, ECE 504, IE 516, IE 517, IE 522, ME 534, MSE 421, NE 441, NE 575, NE 579, NE 585, and STAT 567.

Reliability and Maintainability Engineering Graduate Certificate – Electrical Engineering concentration

Currently, the available elective courses are CBE 585 / NE 585, ECE 504, IE 516, IE 517, IE 522, ME 534, MSE 421, NE 441, NE 575, NE 579, NE 585, and STAT 567.

Reliability and Maintainability Engineering Graduate Certificate – Industrial Engineering concentration

Currently, the available elective courses are CBE 585 / NE 585, ECE 504, IE 516, IE 517, IE 522, ME 534, MSE 421, NE 441, NE 575, NE 579, NE 585, and STAT 567.

Reliability and Maintainability Engineering Graduate Certificate – Materials Science and Engineering concentration

Currently, the available elective courses are CBE 585 / NE 585, ECE 504, IE 516, IE 517, IE 522, ME 534, MSE 421, NE 441, NE 575, NE 579, NE 585, and STAT 567.

Reliability and Maintainability Engineering Graduate Certificate – Nuclear Engineering concentration

Currently, the available elective courses are CBE 585 / NE 585, ECE 504, IE 516, IE 517, IE 522, ME 534, MSE 421, NE 441, NE 575, NE 579, NE 585, and STAT 567.

Rationale: Statistics 560 is removed as an elective because the BAS department plans to discontinue the course because of a retirement. Materials Science and Engineering 421 is added due to its relevance and for encouraging Materials Science and Engineering students to participate in the program. Nuclear Engineering 441 is added as an elective because of its relevance to the Reliability and Maintainability program. Impact on other units: None. Financial impact: None.

DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

- **ADD CONCENTRATION – MATERIALS SCIENCE AND ENGINEERING MAJOR, MS AND PHD**

  Automotive materials concentration

In the 2015-2016 Graduate Catalog, add automotive materials concentration to the MSE major for both the MS and PhD.

Rationale: The department approved the addition of Automotive Materials Concentration, in order to prepare our graduate students for the national strategic goals in advanced manufacturing and advanced materials, also for the state strategic goals in automotive industry. Impact on other units: None. Financial impact: None.

REVISE REQUIREMENTS FOR MATERIALS SCIENCE AND ENGINEERING MAJOR, MS

In the 2015-2016 Graduate Catalog, revise third bullet under thesis option as follows:

- Additional courses up to 12 hours total in related areas. These courses must include MSE 515 and MSE 516 for the metallurgy concentration; MSE 539, 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.

Rationale: We added a line "two courses from the approved automotive materials specialization list for the automotive concentration" for the proposed addition of automotive materials concentration to MSE program. No other changes were made to the degree requirements. Impact on other units: None. Financial impact: None.

REVISE REQUIREMENTS FOR MATERIALS SCIENCE AND ENGINEERING MAJOR, PHD

In the 2015-2016 Graduate Catalog, revise bullets 3 and 4 and then combine to make them one bullet (bullet 3): Revise bullets 5 and 6 to include wording for the new automotive materials concentration.

Requirements

- For students proceeding directly to the PhD from the baccalaureate degree, a minimum of 72 graduate hours is required. These hours must include 42 graduate hours, including MSE 511, MSE 512, MSE 513, and MSE 514, at least 6 hours of 600-level courses in the department, and 30 hours of dissertation. Six hours of MSE 503 may be counted toward degree requirements. At least 24 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 hours of course work must be from the approved nanomaterials specialization list. For students in the biomaterials concentration at least 12 hours of course work must be from the approved biomaterials specialization list. For students in the automotive materials concentration at least 12 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 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 hours is required. These hours must include 18 hours of graduate course work with at least 6 hours of 600-level courses in the department and 30 hours of dissertation. Three 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 hours of course work must be from the approved nanomaterials specialization list. For students in the automotive materials concentration at least 12 hours of course work must be from the approved automotive materials specialization list. At least 12 hours must be courses in the department. For students in the Energy Science and Engineering concentration, all 18 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 hours is required. These must include 15 hours of graduate course work with at least 6 hours of 600-level courses in the department and 33 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 hours of course work must be from the approved nanomaterials specialization list. For students in the automotive materials concentration at least 12 hours of course work must be from the approved automotive materials specialization list. Three hours of MSE 503 may be counted toward degree requirements. At least 12 hours must be courses in the department. For students in the Energy Science and Engineering concentration, 18 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: We added a line "for students in the automotive materials concentration at least 12 hours of course work must be from the approved automotive materials specialization list" in the last three bullets for the proposed addition of automotive materials concentration to MSE program. No other changes were made to the degree requirements. Impact on other units: Financial impact: None.

DEPARTMENT OF MECHANICAL, AEROSPACE, AND BIOMEDICAL ENGINEERING

REVISE REQUIREMENTS – BIOMEDICAL ENGINEERING MAJOR, MS

In the 2015-16 Graduate Catalog, remove current requirement text and replace with the following:

Requirements
In biomedical engineering, two MS options are offered. Option I requires a thesis. Option II does not require a thesis and provides graduate students, including co-op and other off-campus students, the opportunity to focus their programs in special areas through extended course work.

Option I (Thesis)

	Hours Credit
[1] Course work total	21
Thesis	9
Total hours	30

[1] Courses in program (500-level or above) – 12 hours minimum. Mathematics (400-level or above) – 6 hours minimum.

Option II (Non-Thesis)

	Hours Credit
[1] Course work total	30
Total hours	30

[1] Courses in program (500-level or above) – 18 hours minimum. Mathematics (400-level or above) – 6 hours minimum.

For all program options, other 500-level engineering courses that are approved by the student's master's committee and the graduate programs committee may be substituted for the mathematics courses. All program options require participation in the departmental graduate seminars program and passing a final examination on all work submitted for the degree. The thesis option, Option I, requires submission and defense of a written thesis that demonstrates the ability to conduct and report an independent investigation.

REVISE REQUIREMENTS FOR BIOMEDICAL ENGINEERING MAJOR, PHD

In the 2015-16 Graduate Catalog, remove current requirement text and replace with the following:

Requirements
All students must complete a minimum of 72 semester hours beyond the bachelor's degree. These hours must include a minimum of 36 hours of graduate course work graded A-F, a minimum of 24 hours in Doctoral Research and Dissertation, and the remaining hours to reach a minimum of 72 may or may not be graded A-F.

Students entering the PhD program directly from a baccalaureate program will be required to take a minimum of 36 hours of graduate course work graded A-F, exclusive of dissertation credit or seminar courses.

Students entering the PhD program with a master's degree will be required to take a minimum of 12 hours of graduate course work graded A-F, exclusive of dissertation credit or seminar courses.

These students may satisfy the degree requirements beyond the bachelor's degree with one of the following example combinations:

- 36 hours of course work plus 36 hours of Doctoral Research and Dissertation (minimum course work)
- 48 hours of course work plus 24 hours of Doctoral Research and Dissertation (minimum Research and Dissertation)
- Other combinations of course work (≥ 36 hours) and Doctoral Research and Dissertation (≥ 24 hours) that sum to ≥ 72 total hours

This course work, including that taken for an MS degree, must include:

- A minimum of 6 semester hours of graduate work in mathematics courses numbered 400 or above and a minimum of 3 hours numbered 500 or above. The department may approve other courses with sufficient mathematical content to meet this requirement.
- A minimum of 21 hours of graduate course work in the major. The department may approve other departmental courses to meet this requirement.
- A minimum of 6 hours of graduate course work is required at the 600 level. These are exclusive of thesis or dissertation credit.

Additional requirements for all students include the following:

- Registration and participation in the graduate seminar in the major program.
- Meet all departmental examination requirements, which include passing a qualifying exam comprised of written and oral comprehensive exams.
- Presentation of a dissertation proposal to the student's advisory committee and approval of that proposal by that committee.
- Successful defense of the dissertation.

Rationale: The BME curriculum was substantially revised last year, and the requirements being amended here were newly introduced. We have determined that enforcing these requirements in the short term is not feasible. An evaluation of required core, breadth, and depth course offerings over the past two years yielded a significant lack of resources to offer these courses on a consistent basis. Concerning the four core courses previously required, two courses were offered each year, but the other two courses were offered only once in the two years. Concerning the four breadth courses previously required for various curricular tracks, only one course was offered one time in the two years. Concerning the four depth courses required for various curricular tracks, only one course was offered one time in the two years. While we hope to potentially develop additional courses in the future, sufficient resources are not available at this time to teach the courses set out as required in the previous catalog. In addition, the requirements for BME majors listed above properly align the BME program with the other graduate programs in the department. Impact on other units: None. Financial impact: None.

- **ADD CONCENTRATION – MECHANICAL ENGINEERING MAJOR, MS AND PHD**

  Automotive Manufacturing Simulation and Design concentration

In the 2015-2016 Graduate Catalog, add the following concentration to the mechanical engineering major for both the MS and PhD:

Rationale: Mechanical Engineering is adding a concentration in Automotive Manufacturing Simulation and Design for the MS and PhD degrees. This supports initiatives by Tennessee automotive industries. Impact on other units: None. Financial impact: None.

DEPARTMENT OF NUCLEAR ENGINEERING

REVISE NUCLEAR CRITICALITY SAFETY GRADUATE CERTIFICATE

In the 2015-2016 Graduate Catalog, revise second paragraph - last sentence as follows:

Applicants must submit the application for the certificate during the semester prior to graduation.

Rationale: This information regarding the deadline is only provided in the form itself, but appears nowhere in the catalog where it is most informative. Impact on other units: None. Financial impact: None.

REVISE NUCLEAR SECURITY SCIENCE AND ANALYSIS GRADUATE CERTIFICATE

In the 2015-2016 Graduate Catalog, revise last paragraph to add the following as the last sentence to the paragraph.

… into the M.S. program in nuclear engineering. Applicants must submit the application for the certificate during the semester prior to graduation.

Rationale: This information regarding the deadline is only provided in the form itself, but appears nowhere in the catalog where it is most informative. Impact on other units: None. Financial impact: None.

REVISE RELIABILITY AND MAINTAINABILITY ENGINEERING GRADUATE CERTIFICATE – NUCLEAR ENGINEERING CONCENTRATION

In the 2015-2016 Graduate Catalog, revise last paragraph to add the following as the last sentence to the paragraph.

… academic background, and work experience. Applicants must submit the application for the certificate during the semester prior to graduation.

Rationale: This information regarding the deadline is only provided in the form itself, but appears nowhere in the catalog where it is most informative. Impact on other units: None. Financial impact: None.

COLLEGE OF LAW

All changes effective Fall 2016

I. COURSE CHANGES

REVISE TITLE AND DESCRIPTION

LAW 839 Payment Systems (2)
Basic coverage of different payment systems, including money, credit and debit cards, and negotiable instruments (such as checks and promissory notes under Articles 3 and 4 of the Uniform Commercial Code).

Formerly: Negotiable Instruments (2) Basic coverage of commercial paper, including checks, notes, and other negotiable instruments (Articles 3 and 4 of the Uniform Commercial Code).

SUPPORTING INFORMATION: Rationale: Revises title and description to more accurately reflect course content. Impact on other units: None expected. Financial impact: None expected. Additional Documentation: None required.

REVISE (DE)COREQUISITE AND ADDING (DE)PREREQUISITE

LAW 951 Domestic Violence Clinic (3)
(DE) Prerequisite(s): 813.
(DE) Corequisite(s): 814.

Formerly: (DE)Corequisite(s): 914 and 920.

SUPPORTING INFORMATION: Rationale: Reflects revised faculty opinion regarding which courses are essential for successful completion of course. Impact on other units: None expected. Financial impact: None expected. Additional Documentation: None required.

COLLEGE OF NURSING

All changes effective Fall 2016

I. COURSE CHANGES

REVISE TITLE, DESCIPTION, AND GRADING

NURS 630 Project Organization Seminar I (1) Conceptualization of a clinical problem and initial planning for the DNP Scholarly Project.
Grading Restriction: Satisfactory/No Credit grading only.

Formerly: Project Organization Seminar (1) Conceptualization, analysis, and critical assessment of a clinical problem.
Grading Restriction: Satisfactory/No Credit or letter grade.

REVISE TITLE, HOURS, DESCIPTION, GRADING AND DROP CONTACT HOUR DISTRIBUTION

NURS 631 Project Organization Seminar II (1) Critical assessment of a clinical problem and continued planning for the DNP Scholarly Project.
Grading Restriction: Satisfactory/No Credit grading only.

NURS 632 Project Organization Seminar III (1) Advanced planning for the DNP Scholarly Project and proposal for project implementation.
Grading Restriction: Satisfactory/No Credit grading only.

Formerly: NURS 631 - Advanced Practice Option I (2) Application of advanced practice nursing concepts in area of clinical focus.
Contact Hour Distribution: 1 directed study and 1 practicum.
Grading Restriction: Satisfactory/No Credit or letter grade.
Registration Restriction(s): Doctor of Nursing Practice - nursing major. Minimum student level – graduate.

NURS 632 - Advanced Practice Option II (4) Field experiences in areas of clinical focus and planning for capstone project.
Contact Hour Distribution: 2 directed study and 2 practicum.
Grading Restriction: Satisfactory/No Credit or letter grade.
Registration Restriction(s): Doctor of Nursing Practice - nursing major. Minimum student level – graduate.

RATIONALE: For clarification and consistency of DNP Project courses. National organizations recommend change from DNP Capstone to DNP Scholarly Project. More reflective of course content. Impact on other units: None. Financial impact: None.

REVISE DESCRIPTION AND GRADING

NURS 633 DNP Practice Immersion (1-12) Individually designed practicum in a variety of settings to implement and evaluate the DNP Scholarly Project and its effect on healthcare outcomes.
Grading Restriction: Satisfactory/No Credit grading only.

Formerly: DNP Practice Immersion (1-12) Individually designed practicum, field, or internship experiences in a variety of administrative, educational, research, or clinical practice settings.
Grading Restriction: Satisfactory/No Credit only.

RATIONALE: For clarification of the purpose of the clinical experience in a variety of settings in which outcomes can be affected. Impact on other units: None. Financial impact: None.

REVISE TITLE AND DESCIPTION

NURS 634 DNP Scholarly Project (3) Completion of the DNP Scholarly Project.

Formerly: DNP Capstone (3) Preparation of a tangible and deliverable academic product derived from the practice immersion experience contained in the DNP student's program of study.

RATIONALE: National organizations recommend change from DNP Capstone to DNP Scholarly Project. Impact on other units: None. Financial impact: None

REVISE HOURS

NURS 620 Philosophy of Scientific Practice (3)

Formerly: 4

Rationale: Theoretical basis for nursing practice needed earlier in BSN to DNP clinical concentrations so NURS 510 will be added to all concentration requirements. This eliminates need for content to be provided in NURS 620 since it is repetitive for MSN to DNP students.

II. PROGRAM CHANGES

REVISE ADMISSION REQUIREMENTS - NURSING MAJOR, DNP

In the 2016-17 Graduate Catalog, add a new bullet under the Admission heading with the following text:

- Have completed 3 hours of graduate-level statistics.

Rationale: Align program requirements with those of aspiration schools. Impact on other units: None. Financial impact: None.

REVISE NURSING MAJOR, DNP - PROGRAM REQUIREMENTS

In the 2016-17 Graduate Catalog revise DNP requirements as shown below:

The following courses are required for all students	Hours Credit
NURS 612 - Health and Health Care Policy	3
NURS 613 - Nursing Leadership in Complex Systems	3
NURS 620 - Philosophy of Scientific Practice	3
NURS 622 - Methods for Translational Research	3
NURS 623 - Bioethics, Cultural and Societal Issues within Healthcare	2
NURS 624 - Evidence-Based Practice and Use of Information Technology	3
NURS 625 - Healthcare Economics	3
NURS 630 - Project Organization Seminar I	1
NURS 631 - Project Organization Seminar II	1
NURS 632 - Project Organization Seminar III	1
NURS 633 - DNP Practice Immersion	1-6
NURS 634 - DNP Scholarly Project	3
Epidemiology	3
Total Hours	30-35

Formerly: The following courses are required for all students.

NURS 612 - Health and Health Care Policy/Planning	3
NURS 613 - Nursing Leadership in Complex Systems	3
NURS 620 - Philosophy of Scientific Practice	4
NURS 622 - Methods for Translational Research	3
NURS 623 - Bioethics, Cultural and Societal Issues within Healthcare	2
NURS 624 - Evidence-Based Practice and Use of Information Technology	3
NURS 625 - Healthcare Economics	3
NURS 630 - Project Organization Seminar	1
NURS 631 - Advanced Practice Option I	3
NURS 632 - Advanced Practice Option II	4
NURS 633 - DNP Practice Immersion	1-12
NURS 634 - DNP Capstone	3
Epidemiology	3
Inferential Statistics	3
Total Hours	39-50

RATIONALE: Reflects course title changes and change statistics to prerequisite. Impact on other units: None. Financial impact: None

- **DROP CONCENTRATION – NURSING MAJOR, DNP**

  Nursing Administration

- **ADD CONCENTRATION – NURSING MAJOR, DNP**

  Nurse Executive Practice concentration

RATIONALE: Completion of program provides preparation necessary for American Organization of Nurse Executives [AONE] certification for both manager or Executive Practice [CENP] and/or American Nurses Credentialing Center [ANCC] Nurse Executive Advanced certification [NEA-AC]. Didactic preparation and experiential practicum includes Clinical Services VP/Executive Chief Nursing Office/Chief Nurse Executive, Chief Operating Officer and other healthcare executive roles. Impact on other units: None. Financial impact: None.

REVISE THE REQUIREMENTS FOR THE NURSING ADMINISTRARTION TO THE NURSE EXECUTIVE PRACTICE

In the 2016-17 Graduate Catalog revise to show requirements for the new Nurse Executive Practice concentration

NURS 501	3
NURS 510	3
NURS 589	3
NURS 590	6
NURS 591	6
NURS 594	3
NURS 595	3
Total Hours	27

Formerly: Requirements for Nursing Administration concentration

NURS 501	3
NURS 590	6
NURS 591	6
Total Hours	15

RATIONALE: Showcase to reflect proposed concentration title change, course requirements, and change in credit hours. Impact on other units: None. Financial impact: None

REVISE CONCENTRATION REQUIREMENTS – NURSING MAJOR, DNP

In the 2016-17 Graduate Catalog revise requirements for the different DNP concentrations as shown below.

Requirements for Family Nurse Practitioner concentration

NURS 501	3
NURS 510	3
NURS 504	3
NURS 505	3
NURS 515	3
NURS 570	6
NURS 571	3
NURS 572	2-4
NURS 573	8
Total Hours	34-36

Requirements for Mental Health Practitioner concentration

NURS 501	3
NURS 510	3
NURS 504	3
NURS 505	3
NURS 515	3
NURS 519	3
NURS 560	6
NURS 561	6
Total Hours	30

Requirements for Pediatric Nurse Practitioner concentration

NURS 501	3
NURS 510	3
NURS 504	3
NURS 505	3
NURS 515	3
NURS 527	5
NURS 528	2
NURS 550	2
NURS 551	2
NURS 562	2
NURS 563	2
Total Hours	30

Requirements for Nurse Anesthesia concentration

NURS 501	3
NURS 510	3
NURS 504	3
NURS 505	3
NURS 506	3
NURS 516	2
NURS 517	2
NURS 518	2
NURS 522	3

NURS 523	2
NURS 524	3
NURS 525	3
NURS 526	2
NURS 544	4
NURS 545	8
NURS 546	2
NURS 547	9
NURS 548	10
NURS 549	10
NURS 583	2
Total Hours	79

Formerly

Requirements for Family Nurse Practitioner concentration

NURS 501	3
NURS 504	3
NURS 505	3
NURS 515	3
NURS 570	6
NURS 571	3
NURS 572	2-4
NURS 573	8
Total Hours	31-33

Requirements for Mental Health Practitioner concentration

NURS 501	3
NURS 504	3
NURS 505	3
NURS 515	3
NURS 519	3
NURS 560	6
NURS 561	6
Total Hours	27

Requirements for Nurse Anesthesia concentration

NURS 501	3
NURS 504	3
NURS 505	3
NURS 506	3
NURS 516	2
NURS 517	2
NURS 518	2
NURS 522	3
NURS 523	2
NURS 524	3
NURS 525	3
NURS 526	2
NURS 544	4
NURS 545	8
NURS 546	2
NURS 547	9
NURS 548	10
NURS 549	10
NURS 583	2
Total Hours	76

Requirements for Pediatric Nurse Practitioner concentration

NURS 501	3
NURS 504	3
NURS 505	3
NURS 515	3
NURS 527	5
NURS 528	2
NURS 550	2
NURS 551	2
NURS 562	2
NURS 563	2
Total Hours	27

RATIONALE: Theoretical basis for nursing practice needed earlier in BSN to DNP clinical concentrations so NURS 510 will be added to all concentration requirements Impact on other units: None. Financial impact: None

COLLEGE OF SOCIAL WORK

All changes effective Fall 2016

I. COURSE CHANGES

(SOWK) Social Work

ADD

SOWK 541 Foundation Field Practice Extended I (1) Field seminar in generalist social work practice.
Grading Restriction: Satisfactory/No Credit grading only.
Registration Restriction(s): Master of Science in Social Work - social work major.

SOWK 543 Foundation Field Practice Extended III (3) Instruction and supervision in generalist work practice. Includes a seminar and agency-based internship.
Grading Restriction: Satisfactory/No Credit grading only.
(RE) Prerequisite(s): 542.
Registration Restriction(s): Master of Science in Social Work - social work major.

SOWK 547 Advanced Organizational Theory and Practice (3) Serves as an introduction to social service/nonprofit organizations through the lens of social, economic and environmental justice. The content provided will afford the knowledge/skill needed for entrance into management positions in human service/nonprofit/governmental/quasi-governmental organizations. Topics will include multi-organization initiatives such as partnerships, community coalitions and alliances, theories in economic development such as how economic factors affect the social sector with particular attention to entrepreneurship/venture philanthropy, and collective impact. Will consider aspects of governmental relations, operational best practices including practical skills such as running meetings, employee development, advanced strategic planning and futuring, understanding and incorporating accreditation standards, organizational culture and ethical practice in organizations. Topics such as nonprofit governance and accountability, human resource development, supervision, compensation strategies, management theories and employment law will also be addressed.
(RE) Prerequisite(s): 510, 512, 513, 519, 522, 537, 538 and 539.
Comment(s): Advanced Standing satisfies prerequisites.
Registration Restriction: Minimum student level – graduate.
Registration Permission: Non-MSSW students may register with consent of instructor.

SOWK 584 Advanced Field Practice Extended (4) Instruction and supervision in advanced evidence-based social work practice. Includes an agency-based experience. Students may take concurrent required concentration and elective courses, but are not required to do so.
Grading Restriction: Satisfactory/No Credit grading only.
Repeatability: May be repeated. Maximum 12 hours.
(RE) Prerequisite(s): 543 or 544.
Comment(s): Advanced Standing satisfies prerequisites.
Registration Restriction(s): Master of Science in Social Work - social work major.

REVISE TITLE AND ADD REGISTRATION PERMISSION

SOWK 536 Foundation Field Practice Block (1-6)
Registration Permission: Consent of instructor.

Formerly: Foundation Field Practice

REVISE TITLE, HOURS, AND DROP REPEATABILITY

SOWK 542 Foundation Field Practice Full Time I/Extended II (2)
Instruction and supervision in generalist social work practice. Includes a seminar and agency-based internship.

Formerly: Foundation Field Practice I (1-3)
Repeatability: May be repeated only if a grade of S has been earned. Maximum 3 hours.

SOWK 544 - Foundation Field Practice Full Time II (4) Instruction and supervision in generalist social work practice. Includes a seminar and agency-based internship.

Formerly: Foundation Field Practice II (1-4)
Repeatability: May be repeated only if a grade of S has been earned. Maximum 4 hours.

REVISE TITLE AND DESCRIPTION

SOWK 545 Resource Development and Management (3) Focuses on financial matters involved in the leadership of a non-profit or governmental agency. Key factors such as fund attainment and accounting/budgeting resources will be addressed with a grounding in concepts of social justice, contributive justice, and distributive justice - all based on the National Association of Social Workers Code of Ethics. Specific content addressed in the course includes financial management, budgeting processes, basic accounting principles, financial reporting requirements, IRS standards, audits, financial software utilization, grant management including application writing skills, fund development, donor cultivation, fundraising, social agency mergers and acquisitions, real estate planning, impact of public policy on fiscal climate and justice, and ethics in resource development.

Formerly: Evidence-based Resource Development Practice Across Systems

SOWK 548 Advanced Change Management and Policy Practice (3) Instructs students in the traditions of social work change and the empowerment of clients from within an organizational system and as an individual change agent. Topics addressed will include advanced advocacy skills, coalition building in order to impact legislation, policy research, congressional testifying, policy development and analysis at organizational/local/state/federal levels, use of information technology and social media in bringing about change, and organizational government relations. Empowerment of recipients of service and implementation science will be addressed.

Formerly: Advanced Policy Practice

SOWK 549 Program Development and Continuous Improvement (3) Addresses the important aspects of measuring and demonstrating the impact that a social program has on clients. Topics such as assessment, evaluation in social sector, fidelity to evidence-based practices, basic principles of program development, needs assessments, environmental scan, impact measurements, process evaluation, information management through technology, data driven decision-making, and translational research skills will be addressed.

Formerly: Evaluative Research

REVISE TITLE, HOURS, (RE)PREREQUISITES AND ADD COMMENTS

SOWK 586 Advanced Field Practice Full Time (6)
(RE) Prerequisite(s): 543 or 544.
Comment(s): Advanced Standing satisfies prerequisites.

Formerly: Advanced Field Practice (1-6)
(RE) Prerequisite(s): 542 and 544.

REVISE TITLE, HOURS, (RE)PREREQUISITES, ADD COMMENTS AND REGISTRATION PERMISSION

SOWK 587 Advanced Field Practice Block (1 - 12)
(RE) Prerequisite(s): 543 or 544.
Comment(s): Advanced Standing satisfies prerequisites.
Registration Permission: Consent of instructor.

Formerly: Advanced Field Practice (6 -12)
(RE) Prerequisite(s): 542 and 544.

REVISE TO ADD REPEATABILITY

SOWK 677 Teaching Practicum I
Repeatability: May be repeated. Maximum 4 hours.

SOWK 678 Teaching Practicum II
Repeatability: May be repeated. Maximum 4 hours.

Rationale: Current field courses have variable credit hours. This has enabled full-time, extended study, and part-time advanced standing students to register for the same courses but to designate the number of credit hours for which they are registering. The default number of credit hours in the Banner registration system is 1. Unfortunately, this flexibility has led to many students registering incorrectly, often for the default one credit hour. The consequences include an inordinate amount of time spent by Field Coordinators and Senior Recorders communicating with students about registration changes, problems when students are submitting Admission to Candidacy forms, and late fees when students add credit hours. Although the field faculty agree that it is necessary to retain some flexibility in field registration for students who are studying abroad, experience emergencies, maternity leaves, etc. we would like to change most field courses to fixed credit hours. This should alleviate much of the confusion and many of the problems with incorrect registration. We are adding/revising field courses with fixed credit hours and designating them as full-time or extended.

SOWK 545, 547, 548, 549 are required courses in the revised Management, Administration and Policy Practice concentration. Financial Impact: None. Impact on Other Units: None.

II. PROGRAM CHANGES

- **DROP CONCENTRATION – SOCIAL WORK MAJOR, MSSW**

  Management, Leadership and Community Practice concentration

- **ADD CONCENTRATION – SOCIAL WORK MAJOR, MSSW**

  ~~Management, Administration and Policy Practice concentration~~
  Organizational Leadership concentration

Per our faculty meeting, we are requesting to revise our curriculum proposal to change the name of our new MSSW concentration from Management, Administration and Policy Practice to: Organizational Leadership.

ADD HEADING AND TEXT FOR NEW CONCENTRATION

In the 2016-17 Graduate Catalog add heading and text for new concentration – Organizational Leadership:

Organizational Leadership
The Organizational Leadership concentration is based on the underlying principles of social, economic and environmental justice. The students graduating from this concentration will be prepared to work in a variety of settings including varieties of human service agencies, schools, health care facilities, governmental entities, quasi-governmental entities, foundations, funding and membership nonprofits, and policy analysis and advocacy positions.

The goal of the concentration is to produce social workers who are critical thinkers in ethically-sound, systemic, skill-based, evidence-based practice. The social workers who graduate with this concentration will be equipped to be involved in activities such as, but not limited to, leading and managing programs and organizations, planning, asset and financial management, use of information technology, grant writing and management, coordinating, developing and evaluating direct and indirect activities for targeted at-risk populations, clients and client systems. Students will also graduate understanding advanced policy analysis and advocacy strategies.

Rationale: The MSSW program seeks to prepare graduates to make demonstrable improvements in the quality of life of at-risk vulnerable populations including individuals, families, groups, organizations, communities, the state of Tennessee, the nation and the world. The degree allows for students to specialize in one of two areas, clinical or micro-practice, as well as macro-practice.

The outcomes and number of applicants have been solid for the clinical practice concentration which is known as Evidence Based Interpersonal Practice. However, the macro-practice track, known as Management, Leadership and Community Practice does not currently reflect the latest in market trends in the profession of social work. There has been an increased demand for human service leadership as well as policy advocacy within the human service arena. This market change has left community organizing to the Bachelors level practice arena. Therefore, our current macro concentration which is less focused on the direction of macro social work market demand needs to be updated.

The College would like to focus the macro social work concentration on the area of human service administration (leadership in nonprofit management, governmental agency leadership, fund development and management, capacity building and policy practice). This new focus is the result of significant research, both qualitative and quantitative. A survey was sent to 167 executive directors of nonprofit human service agencies asking forced choice questions about current trends in agency leadership as well as open ended questions asking what skills and knowledge would they want for new managers in their organizations. There was also a series of interviews conducted collecting data about opinions on leadership/management in governmental and human service agencies. The interviews were with selected individuals who have been in the field for significant periods of time. Results were compiled and analyzed and compared to the current content being taught in the macro concentration of our MSSW.

The data from the survey and interviews was also cross-referenced with the new (2015) competencies from the Council on Social Work Education (CSWE), our accrediting body. These competencies, known as Educational Policy and Accreditation Standards (EPAS) support the work done in our information gathering phase related to the macro content of our concentration. For example, the new EPAS indicates that our college is expected to educate macro level social workers to value the importance of inter- professional teamwork and communication in interventions, recognizing that beneficial outcomes may require interdisciplinary, inter- professional, and inter-organizational collaboration.

In order to practically implement the more focused and nuanced macro content into our program we propose dropping one course as a requirement of the concentration, adding a new required course and adjusting the content of two of the required courses for the concentration.

Financial impact: This change will be handled with existing faculty and is anticipated that there will be no additional financial costs incurred. Impact on other units: There will be no impact on other units. All courses will be offered within the College of Social Work and taken by social work graduate students.

COLLEGE OF VETERINARY MEDICINE

All changes effective Summer 2016

COURSE CHANGES

Learning outcomes for the DVM in Veterinary Medicine

Graduates of the Professional Program in Veterinary Medicine upon graduation will be able to demonstrate professional skills of a veterinarian, including overall clinical competencies (technical and nontechnical), problem solving and professionalism (global outcome).

Specific learning objectives upon completion of the 4 year curriculum include:

1: Ability to diagnose patient problems, interpret clinical laboratory findings and manage patient records.
2: Ability to plan patient treatment, including identifying referral when indicated.
3: Demonstrate basic medical skills and case management.
4: Design and implement basic anesthesia protocols, conduct appropriate pain management plans and conduct appropriate animal welfare management.
5: Demonstrate basic emergency and intensive care case management.
6: Address strategies of health promotion, disease prevention and biosecurity, zoonotic and food safety issues involving animals and humans.
7: Demonstrate appropriate communication methods including client communication and medical personnel communication.
8: Demonstrate awareness of research in furthering the practice of veterinary medicine.
9: Demonstrate overall professionalism.

(VMD) Veterinary Medicine

ADD

VMD 849 One Health (2) Online course addresses the link between human, animal, and environmental health. Each online module focuses on some aspect of "One Health" and may include topics such as emergency preparedness, zoonotic diseases, antibiotic resistance and food safety, responsible pet ownership and the human-animal bond, and the effects of climate on disease prevalence. Methods of intervention and problem solving such as research design, program evaluation, community education, and policy analysis are also incorporated.
Repeatability: Not repeatable. May be taken once for credit.
Registration Restriction(s): Veterinary Medicine Students only.
Registration Permission: Consent of instructor.
Schedule Type: TE. Instructional Method: 02.

Rationale: This course will provide an overview of One Health. All dual DVM-MPH students and MPH-VPH students will be required to complete it. This course will replace the current requirements of VMD 837 and PH 550 and will more thoroughly cover subjects relevant to veterinary public health. Specific topics and issues in One Health will be covered, and students will learn and use skills such as research design, program evaluation, community education and policy analysis in assignments. This course will be an introductory course that covers the many roles of a veterinary public health practitioner. Based on experience and knowledge gained in this course, students will be able to tailor the rest of their veterinary public health focus. This course will be offered online to allow flexibility to students also enrolled in other classes, particularly dual students that have an intense class schedule. Additionally, by offering the course online, students will have adequate time to work through modules and excel in assignment completion. This course will be cross-listed as CEM 506 One Health. Financial Impact: None.

This course supports learning objectives: global outcome, 6, 7, 8 for the VMD Program.

Support from assessment activities and current research into veterinary careers. AVMA Council on Education expects all students will have access to educational programs in One-Health and Public Health topics in Veterinary education as part of the accreditation process.

VMD 817 Success and Wellness One-Health II (1) Develop essential non-technical skills needed for veterinary professional competence. A continuation of VMD 812; communication skills, leadership skills, business management skills, ethical decision making skills, and health-related behavior skills. Students learn skills in medical academic achievement, personal and business finance, ethical-decision making, stress management, career paths in veterinary medicine, communication and leadership skills needed in effective teamwork and the basics of mental health in the veterinary setting. Successive courses in this series teach advanced skills.
Grading Restrictions: Satisfactory/No Credit.
Repeatability: Not repeatable. May be taken once for credit.
Registration Restriction(s): Veterinary Medicine Students only.

Rationale: Critical areas of non-technical skills needed for successful practice in veterinary medicine will be taught. This is the continuation of year one of a 4 year course that is under curricular design. The VMD Curriculum Committee and the College faculty voted June 10, 2014 to approve inclusion of non-technical skills into the curriculum and to initiate the content with this year-1 course. The course will be composed of in class discussion, work assignments, resume building and more task oriented activities. S/NC grading

is elected as there is no planned exam and grading will be based on participation, attendance and completion of external projects. The course will be required within the general curriculum for graduation. The 1 credit hour assigned to this class will be moved from VMD 816, which will be reduced by 1 credit to maintain the total programmatic 165 required credit hour. Some of the content currently taught in VMD 816 will be incorporated into this course. The American Veterinary Medical Association Council on Education (AVMA COE) requires Colleges of Veterinary Medicine to provide instruction in the non-technical competencies provided in this course. This has been a greater focus of accreditation oversight in the past 2-3 years. This course will address educational objectives of our curriculum and meet educational standards set by the COE. Financial Impact: None.

This course supports learning objectives: global outcome, 2, 7, 9 for the VMD Program.

Support from assessment activities and research within the CVM, College of Veterinary Social Work and AAVMC Research on Veterinary Student Wellness, Stress, and Suicide. Student surveys indicate a need for ongoing training in finance, business, stress-management, and other topics included in the series.

VMD 839 Success and Wellness One-Health III (1) Develop essential non-technical skills needed for veterinary professional competence. A continuation of VMD 817. Advanced training in communication, leadership, business management, ethical decision making, and health-related behavior skills.
Grading Restrictions: Satisfactory/No Credit.
Repeatability: Not repeatable. May be taken once for credit.
Registration Restriction(s): Veterinary Medicine Students only.

Rationale: Critical areas of non-technical skills needed for successful practice in veterinary medicine will be taught. This is year two of a 4 year course that is under curricular design. The VMD Curriculum Committee and the College faculty voted June 10, 2014 to approve inclusion of non-technical skills into the curriculum. This will expand the content into the second year of the curriculum. The course will be composed of in class discussion, work assignments, resume building and more task oriented activities. S/NC grading is elected as there is no planned exam and grading will be based on participation, attendance and completion of external projects. The course will be required within the general curriculum for graduation. The 1 credit hour assigned to this class will be moved from VMD 846, which will be reduced by 1 credit to maintain the total programmatic 165 required credit hour. The American Veterinary Medical Association Council on Education (AVMA COE) requires Colleges of Veterinary Medicine to provide instruction in the non-technical competencies provided in this course. This has been a greater focus of accreditation oversight in the past 2-3 years. This course will address educational objectives of our curriculum and meet educational standards set by the COE. Financial Impact: None.

This course supports learning objectives: global outcome, 2, 7, 9 for the VMD Program.

Support from assessment activities and research within the CVM, College of Veterinary Social Work and AAVMC Research on Veterinary Student Wellness, Stress, and Suicide. Student surveys indicate a need for ongoing training in finance, business, stress-management, and other topics included in the series.

VMD 858 Success and Wellness One-Health IV (1) Develop essential non-technical skills needed for veterinary professional competence. A continuation of VMD 839. Advanced training in communication, leadership, business management, ethical decision making, and health-related behavior skills.
Grading Restrictions: Satisfactory/No Credit.
Repeatability: Not repeatable. May be taken once for credit.
Registration Restriction(s): Veterinary Medicine Students only.

Rationale: Critical areas of non-technical skills needed for successful practice in veterinary medicine will be taught. This is year two of a 4 year course that is under curricular design. The VMD Curriculum Committee and the College faculty voted June 10, 2014 to approve inclusion of non-technical skills into the curriculum. This will expand the content into the second year of the curriculum. The course will be composed of in class discussion, work assignments, resume building and more task oriented activities. S/NC grading is elected as there is no planned exam and grading will be based on participation, attendance and completion of external projects. The course will be required within the general curriculum for graduation. The 1 credit hour assigned to this class will be moved from VMD 868 which will be reduced by 1 credit to maintain the total programmatic 165 required credit hour. The American Veterinary Medical Association Council on Education (AVMA COE) requires Colleges of Veterinary Medicine to provide instruction in the non-technical competencies provided in this course. This has been a greater focus of accreditation oversight in the past 2-3 years. This course will address educational objectives of our curriculum and meet educational standards set by the COE. Financial Impact: None.

This course supports learning objectives: global outcome, 2, 7, 9 for the VMD Program.

Support from assessment activities and research within the CVM, College of Veterinary Social Work and AAVMC Research on Veterinary Student Wellness, Stress, and Suicide. Student surveys indicate a need for ongoing training in finance, business, stress-management, and other topics included in the series.

ADD AS SECONDARY CROSS-LISTED COURSE

VMD 820 Wildlife Medicine: Conservation and Policy (2-3) Both online and in-person study abroad components. The online portion of the course will explore policy and economics of wildlife medicine as well as address human health concerns in developing nations. A clinical component abroad will allow students to learn to handle and treat medical and surgical conditions in wild animals. Students must satisfactorily complete online modules and associated assignments, participate in didactic and clinical activities while abroad, and write a reflective paper upon completion of the course.
Cross-listed: (See Comparative and Experimental Medicine 531.)
Contact Hour Distribution: 1 hour online, 1–2 hours off campus.
Grading Restriction: Satisfactory/No Credit.
Repeatability: May be repeated. Maximum 6 hours.
Comment(s): Veterinary Medicine students may count the course only once (either 2 or 3 hours) toward degree requirements.
Registration Permission: Consent of instructor.
Schedule Types: TE, OFF. Instructional Methods: 02, 10.

Rationale: Both the College of Veterinary Medicine and the Comparative and Experimental Medicine program have few options available for students to participate in international learning experiences. Additionally, many students have a desire to work with wildlife as a career option but have little knowledge about the politics and economics involved in this type of career, especially in developing nations. This course would be open to graduate and senior undergraduate students, but all students will need instructor approval prior to enrollment. There are no specific pre-requisite requirements, but some experience with clinical veterinary medicine or handling wildlife is preferred. Because of facility space, a maximum of 12 students can enroll. Grading will be based on satisfactory completion of online modules and associated assignments, participation in didactic and clinical activities while abroad, and writing of a reflective paper at the end of the course. Students will incur additional financial debt from participation in this course due to flights and in-country costs. This course will be cross-listed as CEM 531. The Comparative and Experimental Medicine program is aware of this change and has submitted the primary cross listed course for consideration.

Financial Impact: This course will have no financial cost to the department or University as long as a minimal student enrollment of 10 students is secured per session. If less than 10 students enroll, the faculty instructor will incur housing and partial travel cost that may be covered personally or by the department. The department and associate dean have agreed to support these costs. Students are responsible for their cost of travel and additional course costs. Financial aid can be requested to cover the additional costs and if available from the college or other sources, partial or whole travel scholarships may be available to defray the additional costs.

This course supports learning objectives: global outcome,1, 2, 3,4,5,6,7, 9 for the VMD Program

Support for International Programs comes from AAVMC and AVMA COE. This program supports One-health initiatives as well as cultural competency and diversity initiatives within the college. Students are actively seeking international opportunities within the veterinary curriculum and this represents only one of two programs.

REVISE HOURS

VMD 899 Externship (2-8)

Formerly: (2-6)

Rationale: Many advanced research, One-Health, public health and advanced training externship opportunities provide an advanced training program that may encompass up to 8 weeks of training. Examples include the CDC, NIH, San Diego Zoo, Emory University and other training programs. The additional time commitment allows meaningful fieldwork, research project completion and advanced training that is not available at our institution. These programs are unique and available to a select number of students through a rigorous application and selection process. Financial Impact: None.

VMD 868 Introduction to Animal Behavior (1)

Formerly: (2)

Rationale: This is an introductory course. Over the past 3 years student reviews and instructor assessment have concluded that the time allotment for the course is excessive for the content needed to be delivered. A reduction of 2 hours/week of lecture of lecture equivalent is sufficient to cover the introductory topics as other courses also overlap in content. The reduction helps to reduce excessive overlap in teaching, improve course efficiency and allows the 1 credit hour to be used for the faculty-approved course series (Success and Wellness One-Health IV). The revised course continues to be a part of the core curriculum and had been moved earlier into the second year. This change was approved by the CVM Curriculum committee in March, 2015 by unanimous vote. Financial Impact: None.

This course supports learning objectives: global outcome, 1,2, 3, 4, 6, 7, 8 for the VMD Program

Support from Instructor and student course assessment as well as CVM Curriculum Committee assessment of course revisional recommendations.

VMD 846 Multispecies Medicine (2)

Formerly: (3)

Rationale: As the amount of general knowledge and new information in veterinary medicine expands, there is a need for information of interest to only a small portion of the students to be moved from the core curriculum to elective programs. The revised course continues to be a part of the core curriculum within the veterinary curriculum but provides core information targeted to the generalist. The Multispecies Medicine course's lectures and labs covering two specialized topics, reptile and zoo animal medicine, will be moved to regularly-offered elective courses where those with specialized interest can access this content. These change allow room in the core curriculum for a new course ('Success and Wellness One-Health III") as well as optimizes core content to student focus areas. This change was approved by the CVM Curriculum committee on 11/2615 by unanimous vote. Financial Impact: None.

This course supports learning objectives: global outcome, 1,2, 3, 4, 5, 6 for the VMD Program

Support from Instructor as well as CVM Curriculum Committee for streamlining course content to provide core information. Allows room in curriculum to include Success and Wellness course III.

REVISE TITLE AND DESCRIPTION

VMD 825 Advanced Veterinary Anatomy I (2) Lectures and laboratories for the study of embryology, microscopic anatomy, and radiographic anatomy in common domestic animals and to relate structure with function.

Formerly - Veterinary Microscopic Anatomy I (2) Lectures, laboratories, and demonstrations are used in the study of the cell, embryology, and microscopic anatomy of organ systems in common domestic animals to relate structure with function.

Rationale: Currently we are slightly below the maximum allowable credit hours and many instructors do not use their full allotted time (end lectures early etc.). Some of the topics are over-taught (excessive detail on embryonic connective tissue, for example, which has no practical application). Student feedback consistently demonstrates a need for formal training in normal radiographic anatomy. To better serve the students, and to maximize the value of the contact hours, lectures on normal radiographic anatomy will be added to the current course. These additional lectures will nicely complement the information currently taught in this course.

The students enrolled in this course are concurrently enrolled in VMD 821 Veterinary Anatomy I, therefore we chose to name the changed course Advanced Veterinary Anatomy I to reflect the more in depth nature of the course material. Impact on other units: VMD 825 Veterinary Microscopic Anatomy I is paired with spring course by the same name (VMD 826 Veterinary Microscopic Anatomy II), so we will change the name of the spring course to match the fall course. Financial Impact: None.

This course supports learning objectives: global outcome, 1,2, 3, 5, 8 for the VMD Program

Support from Instructor and student course assessment as well as CVM Curriculum Committee assessment of course revisional recommendations.

VMD 826 Advanced Veterinary Anatomy II (2) Lectures and laboratories for the study of embryology, microscopic anatomy, and radiographic anatomy in common domestic animals and to relate structure with function.

Formerly - Veterinary Microscopic Anatomy II (2) Lectures, laboratories, and demonstrations are used in the study of the cell, embryology, and microscopic anatomy of organ systems in common domestic animals to relate structure with function.

Rationale: Since the name and description of the first part of this course VMD 825 (Veterinary Microscopic Anatomy I) is being changed to Advanced Veterinary Anatomy I, we are making a similar change to this course. The students enrolled in this course are concurrently enrolled in VMD 822 Veterinary Anatomy II, therefore we chose to name this changed course Advanced Veterinary Anatomy II to reflect the more in depth nature of the course material. Impact on other units: None. Financial Impact. None.

This course supports learning objectives: global outcome, 1,2, 3, 5, 8 for the VMD Program

Support from Instructor and student course assessment as well as CVM Curriculum Committee assessment of course revisional recommendations.

II PROGRAM CHANGES

REVISE REQUIRMENTS

In the 2016-2017 Graduate Catalog, revise paragraph 7 under the Requirements heading 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 and successful completion 165 credit hours.

Formerly: The curriculum requires demonstrated competency of a minimum of 224 clinical skills by the conclusion of the 9th semester and successful completion 165 credit hours.

Rationale: A national capstone examination called the VEA, is now available for US schools to assess basic physiological and diagnostic knowledge of students necessary for clinical success. We will begin this testing in 2016 to help ready our students for clinical training, assess our instructional programs effectiveness and to prepare students to successfully sit the national board examinations in 8 months. A remediation program will be available to help most failing students' progress successfully into clinics on time. Students in clinical training are required to demonstrate technical competency in 200 of 523 core and global competencies required to practice entry level veterinary medicine. The number was reduced to from 224 to 200 as many of the skills are now assessed earlier in the curriculum and prior to the 4th year. The faculty identified competency based outcomes to be completed within each clinical rotation. The required number for completion was determined to be excessive following the first year trial.

Financial impact: The financial impact on the examination is $5100 per year to administer the VEA examination. This fee is paid by the Office of the Associate Dean. There is a minor reduction in financial cost to the College by reducing the number of clinical skills from 200 from 224. This cost reduction is accomplished through reduced personnel time needed to track compliance and outcome assessment.

These changes supports learning objectives: global outcome, 1,2, 3, 4, 5, 6, 7, 8,9 for the VMD Program

Support from Faculty, Curriculum Committee, Assessment Committee and Office of the Dean.

ADD DUAL DVM-MPH DEGREE

In the 2016-2017 Graduate Catalog, add a DVM-MPH Dual Degree to appear as follows:

Students must be currently enrolled in the professional DVM degree program at the University of Tennessee (DVM students) to enter the dual DVM-MPH program; all requirements for both the DVM and MPH degrees must be met for admission. DVM students may enroll in the program at any time during years 1 - 3, but progress and time to completion will be affected by when a student starts the dual program and how many courses are satisfactorily completed each semester. Students will be expected to complete MPH-specific courses during the two summers following the first and second years of veterinary school. Students will pay graduate tuition fees during the summer semester and professional DVM tuition during the fall and spring semesters. Degrees do not need to be awarded simultaneously; if a student has not completed the requirements for the MPH, the student may still receive the DVM but must complete the MPH requirements within one year to take advantage of the shared credits. If a dual student completes the MPH requirements, but does not complete the DVM, the student may still be awarded the MPH.

All core courses for the MPH program and requirements for the DVM program must be completed. Dual DVM-MPH students must also complete CEM 611, CEM 506, and EITHER CEM 507 or CEM 508. An additional 4 elective credits approved by the advisor must also be completed.

Approved Dual Credit
Seven credits from the DVM program can be shared between the two degrees and applied to the MPH total credit count. These seven credits can be shared from any of the following courses: VMD833, VMD 836, VMD 836, VMD 864, VMD 867, or VMD 897. Eight credits from the MPH program can be shared between the two degrees and applied to the DVM total credit count as electives. These eight credits can be shared from any of the following courses: CEM 506, CEM 507, CEM 508, PUBH 587, or PUBH 588.

Rationale: Having a dual DVM-MPH option would make the University of Tennessee more competitive with other veterinary programs. Although the target number of veterinary students entering any given class is currently set at 85, graduate student numbers at the university have the potential to grow. This dual option would help increase graduate student numbers and advanced degrees awarded by the university. For students, such a program would be cost and time effective. Upon graduation, veterinarians average a debt load of $162,113 (American Veterinary Medical Association, 2013 figure). Oftentimes, this debt load dissuades students from pursuing graduate degrees, although their loans are deferred during all advanced training. By completing the dual DVM/MPH program, graduates would shorten the time required to achieve both degrees and be able to start earning earlier than if the degrees were pursued in succession. A recent AVMA report suggested a veterinary degree alone may not be a valuable return on investment, compared to a bachelor's degree. A dual DVM/MPH degree does increase the marketability of a graduate and opens the door to options outside of clinical practice including work with the government and non-profit organizations. The AVMA has also reported a need for veterinarians in the field of veterinary public health. By adding a dual degree, we expect more DVM students to enroll and complete an MPH while at UT.

A concern is the sharing of hours toward two separate degrees. Currently, students with a DVM who are also completing the MPH do not share any courses. The MPH degree requires 42 credits and the DVM requires 165 credits, which is far in excess of most master or doctoral credit requirements. This proposal recommends "sharing" of 15 credits between the two degrees and are described later; with shared credits, students would complete a total of 192 credits for both degrees. This proposal is similar to the already established JD/MPH program. As such, this request is not unique within the university system. Additionally, numerous veterinary colleges throughout the United States have dual DVM/MPH programs similar to this, and they have been approved by the Council on Education in Public Health, the accrediting body for MPH programs. These programs have a similar number of shared credits between the two programs. The VMD courses that would count toward the MPH are veterinary public health focused courses which focus on food hygiene and zoonoses, epidemiology, and infectious diseases among others.

Core requirements for both degrees (DVM and MPH) would not change. The concentration courses for the MPH would be the same as proposed for the stand alone MPH with a veterinary public health concentration. CEM 611 and CEM 506 would be required concentration courses. Students would be required to take either CEM 507 or CEM 508. Four additional elective credits approved by the advisor would also be required. Seven credits from select VMD courses would be applied to the MPH total credit count. Eight credits from the MPH courses would be applied to the DVM total credit count as elective credit.

Impact on other units: None. Utilizes classes already in the graduate catalogue. Financial impact: None. Courses taught by existing faculty members within the Department of Public Health and the College of Veterinary Medicine. Reduces financial burden on DVM students seeking advanced degrees. This proposal will also be submitted simultaneously by the Department of Public Health, College of Education and Environmental Health.

Student learner objectives impacted: MPH Learner Objectives 1, 2, 3, and 4. VMD Learner Objectives global, 1, 3, 6, 7, 8, 9.
Support from assessment activities: Current students and alumni of the MPH Veterinary Public Health Concentration were polled and they expressed support for the proposed changes. Additionally, similar programs at other universities were reviewed for curriculum content. The combined program has full support of the Curriculum Committee of the College of Veterinary Medicine and is similar to the previously approved Dual DVM/PhD program.

INTERCOLLEGIATE: COMPARATIVE AND EXPERIMENTAL MEDICINE

Effective Fall 2016

I. COURSE CHANGES

(CEM) COMPARATIVE AND EXPERIMENTAL MEDICINE

ADD

CEM 506 One Health (2) Online course that will address the link between human, animal, and environmental health. Each online module focuses on some aspect of "One Health" and may include topics such as emergency preparedness, zoonotic diseases, antibiotic resistance and food safety, responsible pet ownership and the human-animal bond, and the effects of climate on disease prevalence. Methods of intervention and problem solving such as research design, program evaluation, community education, and policy analysis are also incorporated.
Schedule Type: TE. Instructional Method: 02.

Rationale: This course will provide an overview of One Health. All dual DVM-MPH students and MPH-VPH students will be required to complete it. Specific topics and issues in One Health will be covered, and students will learn and use skills such as research design, program evaluation, community education, and policy analysis in assignments. This course will be an introductory course that covers the many roles of a veterinary public health practitioner. Based on experience and knowledge gained in this course, students will be able to tailor the rest of their veterinary public health focus. This course will be offered online to allow flexibility to students also enrolled in other classes, particularly dual students that have an intense class schedule. Additionally, by offering the course online, students will have adequate time to work through modules and excel in assignment completion.

ADD PRIMARY COURSE AND CROSS-LIST

CEM 531 Wildlife Medicine: Conservation and Policy (2–3) Both online and in-person study abroad components. The online portion of the course will explore policy and economics of wildlife medicine as well as address human health concerns in developing nations. A clinical component abroad will allow students to learn to handle and treat medical and surgical conditions in wild animals. Students must satisfactorily complete online modules and associated assignments, participate in didactic and clinical activities while abroad, and write a reflective paper upon completion of the course.
Cross-listed: (Same as Veterinary Medicine 820.)
Contact Hour Distribution: 1 hour online, 1–2 hours off campus.
Grading Restriction: Satisfactory/No Credit.
Repeatability: May be repeated. Maximum 6 hours.
Comment(s): Veterinary Medicine students may count the course only once (either 2 or 3 hours) toward degree requirements.
Registration Permission: Consent of instructor.

Schedule Types: TE, OFF. Instructional Methods: 02, 10.

Rationale: Both the College of Veterinary Medicine and the Comparative and Experimental Medicine program have few options available for students to participate in international learning experiences. Additionally, many students have a desire to work with wildlife as a career option but have little knowledge about the politics and economics involved in this type of career, especially in developing nations.

This course would be open to graduate and senior undergraduate students, but all students will need instructor approval prior to enrollment. There are no specific pre-requisite requirements, but some experience with clinical veterinary medicine or handling wildlife is preferred. Because of facility space, a maximum of 12 students can enroll. Grading will be based on satisfactory completion of online modules and associated assignments, participation in didactic and clinical activities while abroad, and writing of a reflective paper at the end of the course. Students will incur additional financial debt from participation in this course due to flights and in-country costs. Financial aid can be requested to cover the additional costs and if available from the college or other sources, partial or whole travel scholarships may be available to defray the additional costs. This course will be cross-listed as VMD 820. The College of Veterinary Medicine is aware of this change.

DROP

CEM 503 Infectious Disease Modeling (2–3)

Rationale: The instructor who created and taught this course has left the university, and no other instructor is available to teach the course. Impact on other units: To our knowledge, this course was not required by any other units.

CEM 509 Clinical Epidemiology (3)

Rationale: The instructor who created and taught this course has retired, and no other instructor is available to teach the course. Impact on other units: To our knowledge, this course was not required by any other units.

CEM 561 Pharmacology (4)

Rationale: This course has not been taught in several years and encountered limited enrollment when it was previously offered. Impact on other units: To our knowledge, this course was not required by any other units.

REVISE HOURS

CEM 544 Cancer Cell Biology (3)

Formerly: CEM 544 Cancer Cell Biology (2)

Rationale: Upon teaching this fairly new course for the first time, the instructor realized that the comprehensive nature of the course and the material covered make it more intensive than 2 credit hours. Adding 1 hour to the course will enable both the instructor and the students to devote more time to the material. Impact on other units: None. Financial impact: None.

II. PROGRAM CHANGES

REVISE GRE ADMISSION REQUIREMENTS – COMPARATIVE AND EXPERIMENTAL MEDICINE, MS

In the 2016-2017 Graduate Catalog, under Admission heading, 3rd paragraph, revise to remove the GRE text in parenthesis as follows:

…and verbal sections of the Graduate Record Examination (1,000 if taken before August 1, 2011).

Rationale: As of 2016, these GRE scores will become obsolete due to new GRE scoring.

REVISE REQUIREMENTS – COMPARATIVE AND EXPERIMENTAL MEDICINE, MS

In the 2016-2017 Graduate Catalog, under Requirements heading, second sentence, revise to add course CEM 616 (1 hour) to the course listing as follows: [CEM 504, CEM 541, CEM 542, and CEM 616 (1 hour) are required].

Also, same paragraph, next to last sentence add "public health" as a potential area of emphasis as follows:

Areas of emphasis may include hematology, oncology, pathology, pharmacology, toxicology, immunology, genetics, infectious disease, epidemiology, metabolism, public health, or other areas of medicine.

Rationale: Already, two CEM students are studying public health, and two Dept. of Public Health faculty members are on the CEM faculty. Adding public health better represents potential areas of emphasis and eliminates the extra requirement that public health students seek program approval for their area of emphasis.

REVISE TEXT – CEM, MS (FORENSIC ODONTOLOGY CONCENTRATION)

In the 2016-2017 Graduate Catalog, 4th paragraph, add the following text as the fourth sentence to the paragraph.

…the student's committee and the director of the program. The CEM 616 course is encouraged, but not required, for forensic odontology students.

Rationale: CEM 616 Comparative and Experimental Medicine Seminar introduces students to various potential foci in comparative and translational medicine via guest speakers from within and outside the program and university. Topics range from post-doctoral opportunities to investigator-driven research results. This course is useful not only in exposing students to other interrelated fields but also as a networking opportunity. In addition, in a program in which the student population is somewhat fractured because of the distance between laboratories, having this course as a requirement would increase contact between all students in the Comparative and Experimental Medicine program. Because of the intensive, three-semester nature of the Forensic Odontology Concentration, not all students engaged in that course of study will have time to enroll in CEM 616; therefore, the course will serve as an elective for forensic odontology students. Impact on other units: None. Financial impact: None.

REVISE GRE ADMISSION REQUIREMENTS – COMPARATIVE AND EXPERIMENTAL MEDICINE MAJOR, PHD

In the 2016-2017 Graduate Catalog, Admission heading, 2nd paragraph, revise to remove the GRE text in parenthesis as follows:

…and verbal sections of the Graduate Record Examination (1,000 if taken before August 1, 2011).

Rationale: As of 2016, these GRE scores will become obsolete due to new GRE scoring.

REVISE REQUIREMENTS – COMPARATIVE AND EXPERIMENTAL MEDICINE MAJOR, PHD

In the 2016-2017 Graduate Catalog, under Requirements heading, second paragraph, revise to add course CEM 616 (1 hour) to the course listing as follows: […CEM 504, CEM 541, CEM 542, and CEM 616 (1 hour) are required…]

Rationale: CEM 616 Comparative and Experimental Medicine Seminar introduces students to various potential foci in comparative and translational medicine via guest speakers from within and outside the program and university. Topics range from post-doctoral opportunities to investigator-driven research results. This course is useful not only for exposing students to other interrelated fields but also as a networking opportunity. In addition, in a program in which the student population is somewhat fractured because of the distance between laboratories, having this course as a requirement would increase contact between all students in the Comparative and Experimental Medicine program. Impact on other units: None. Financial impact: None.

Also, same paragraph, add "public health" as a potential area of emphasis as follows:

Areas of emphasis may include hematology, oncology, pathology, pharmacology, toxicology, immunology, genetics, infectious disease, epidemiology, metabolism, public health, or other areas of medicine.

Rationale: Already, two CEM students are studying public health, and two Dept. of Public Health faculty members are on the CEM faculty. Adding public health better represents potential areas of emphasis and eliminates the extra requirement that public health students seek program approval for their area of emphasis.

BAKER CENTER FOR PUBLIC POLICY

All Changes Effective Fall 2016

(BCPP) Baker Center for Public Policy

ADD

593 Independent Study (1-3) Individualized study of public policy.

Rationale: This course will allow students to study specialized subject matter in the field of public policy. Impact on other units: none. Financial Impact: None.

595 Special Topics in Public Policy (1-3) Seminar addressing an area of study or current issues within the field of public policy.

Rationale: This course will allow faculty affiliated with the Baker Center for Public Policy to offer a seminar on selected topics. Impact on other units: None. Financial impact: None.