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Graduate Council Minutes

Graduate Council

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1-31-2008

### Graduate Council Minutes - January 31, 2008

Graduate Council

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## THE UNIVERSITY OF TENNESSEE

Members Present

Mary Albrecht, Suzanne Allard, Vincent Anfara, Basil Antar, Benjamin Bates, Richard Bennett, Grady Bogue, Stan Bowie, Marianne Breinig, Vijay Chellaboina, Robert Compton, Nicholas Cook, Harry Dahms, Mark DeKay, James Diamond, David Dupper, Michael Ehrhardt, Ann Fairhurst, Thomas George, Frank Guess, Carolyn Hodges, George Hoemann, Michael Ickowitz, Jan Lee, Sibyl Marshall, Sandra McGuire, Sally McMillan, Lane Morris, Joann Ng Hartmann, Stefanie Ohnesorg, Fred Pierce, Kay Reed, Rita Smith, Susan Smith, Pia Wood, Michael Zemel.

The Graduate Council meeting was called to order by Matthew Murray, Chair, on Thursday, January 31, 2007, at 3:00 p.m. in the Board Room of Andy Holt Tower.

1. Minutes of the Preceding Meeting

The minutes of the November 15, 2007 meeting were approved by the Graduate Council.

2. Committee ReportsAcademic Policy Committee

Ben Bates, Chair of the Academic Policy Committee, presented the report for the January 24, 2008 meeting. The committee discussed minus grading for graduate level courses but determined that there was no compelling reason to make a change at UTK at this point.

The committee had also met on November 29, 2007. The committee approved the following recommendation for change.

FROM:

Page 22, 2007-2008 Graduate Catalog

"Courses taken for graduate credit may not be used for both the baccalaureate and a graduate degree program."

TO:

"Courses taken for graduate credit may not be used for both the baccalaureate and a graduate degree program, except in the case of approved dual bachelor's/master's programs."

Graduate Council approved this change.

Appeals Committee

Marianne Breinig, Chair of the Appeals Committee, presented the following report. Three appeals had been considered by the Appeals Committee. One of the appeals is scheduled for a hearing at a future date.

*Credentials Committee*

Michael Zemel, Chair of the Credentials Committee, presented the report for the January 10, 2008 meeting. (Attachment 1) The Graduate Council approved the recommendations.

*Curriculum Committee*

David Dupper, Chair of the Curriculum Committee, presented the report from the January 17, 2008 meeting. (Attachment 2) It was noted that the proposal from the MBA program to increase the hours in the second semester represented an overload to the maximum registration load of 15 hours. The request was approved by the Council as an exception to the policy on maximum load.

The Graduate Council approved the curriculum changes as presented.

3. *New Business*

No new business.

4. *Administrative Reports and Announcements*

Carolyn Hodges, Vice Provost and Dean of the Graduate School, presented information on several topics related to graduate education. Marianne Breinig asked if a change had been made in the process for denials of graduate admission related to the minimum section scores of the IBT-TOEFL. After a discussion of the policy and the process used for evaluation for admission, Matt Murray and Carolyn Hodges confirmed that this policy would be reviewed by the Graduate Council's Academic Policy Committee.

*Graduate Deans Group*

Mary Albrecht, Chair of the Graduate Deans Group, presented the report from the January 10, 2008 meeting. (Attachment 3)

*Graduate Student Senate (GSS)*

Nicholas Cook, President of the Graduate Student Senate presented the report. He noted that Spring 2008 travel fund requests are being evaluated. The GSS is sponsoring the Love Your Libraries 5K Run and Fun Walk on Saturday, February 23, 2008. He also noted that GSS has focused on safety issues for students.

*Chair's Report*

Matt Murray reported that a Nominations Committee had been formed to prepare a slate of candidates for the election of a new Chair of Graduate Council for 2008-2010. The committee is composed of Richard Bennett and Sibyl Marshall.

Murray distributed a copy of proposed Graduate Council Bylaws (Attachment 4) and asked the members to review the document and contact him with suggestions for change or comments.

5. Items from the floor

There were no items from the floor.

With no further business, the meeting was adjourned at 4:55 p.m.

Respectfully Submitted,

Kay Reed  
Acting Secretary to Graduate Council

ATTACHMENT 1  
FACULTY APPROVED TO DIRECT

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INITIAL Approval of Tenure-Track Faculty without Tenure (Probationary)
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Bates, Denise Assistant Professor	Instructional Technology	Until Tenure
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INITIAL OR CONTINUING Approval of Faculty with Tenure
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Guess, Frank Professor	Statistics, Operations, and Management Science	10 years - 2018
Meek, Thomas T. Associate Professor	Materials Science & Engineering	10 years - 2018

## ATTACHMENT 2

## COLLEGE OF AGRICULTURAL SCIENCES AND NATURAL RESOURCES

All Changes Effective Fall 2008

**I. COURSE CHANGES****DEPARTMENT OF AGRICULTURAL ECONOMICS****(047) Agricultural Economics**

DROP

**450 Agricultural Industry Analysis and Forecasting (3)**

ADD

**600 Doctoral Research and Dissertation (3-15)***Grading Restriction: P/NP only.**Repeatability: May be repeated.*

REVISE DESCRIPTION

**470 Natural Resource Economics (3)** Economic analysis of natural resource use and conservation with emphasis on land, water and other renewable resources. Principles for benefit-cost analyses of natural resource projects and policies. Methods for valuation of non-market impacts associated with natural resource use. Tools for analysis of spatial-referenced data.

REVISE TITLE

**430 Food and Agricultural Policy (3)****520 Research Methodology in Agricultural Economics (1)****DEPARTMENT OF ANIMAL SCIENCE****(113) Animal Science**

ADD

**550 Immuno-pathophysiology (3)** Cellular and systemic immune responses to infectious disease and stress that influence whole animal systems.

*(DE) Prerequisite(s): 520.**Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*

**675 Statistical Genomics (3)** Statistical concepts and methods for life sciences, including microarray, QTL, systems genetics and proteomics. Computer analysis of published data will guide the statistical discussion.

*Recommended Background: 6 hours of graduate level statistics. Familiarity with genomic experimental methodologies.*

ADD AND REQUEST VARIABLE TITLE

**515 Special Topics (1-4)** Instructor-initiated course to be offered on topics of current interest.*Repeatability: May be repeated. Maximum 9 hours.**Registration Permission: Consent of instructor.*

ADD PRIMARY COURSE, CROSS LIST AND REQUEST VARIABLE TITLE

**623 Advanced Topics in Obesity (1-4)** Recent advances and concepts, research techniques, and current problems of obesity related to nutrition and exercise sciences. Topics may include disease prevention and treatment, prevalence, etiology, metabolism, and molecular mechanisms of disease. *(Same as Exercise Science 623.)*

*Repeatability: May be repeated. Maximum 6 hours.*

## ADD SECONDARY CROSS-LISTED COURSES

**525 Research Ethics for the Life Sciences (1)** *(See Plant Sciences 525.)*

**556 Physiology of Hormones (3)** *(See Biochemistry and Cellular and Molecular Biology 552.)*

**620 Topics in Microbial Pathogenesis (1-3)** *(See Microbiology 620.)*

## REQUEST APPROVAL FOR VARIABLE TITLE

**681 Advanced Topics in Animal Health and Well-Being (1-4)** Recent advances and concepts, research techniques, and current problems associated with animal health and behavior.

**DEPARTMENT OF BIOSYSTEMS ENGINEERING AND SOIL SCIENCE****(196) Biosystems Engineering**

## DROP SECONDARY CROSS-LISTED COURSE

**552 Biological Treatment Theory (3)** *(See Environmental Engineering 552.)*

## REVISE TITLE OF PRIMARY CROSS-LISTED COURSE

**416 Hydrology** *(Same as Civil Engineering 416.)*

**(194) Biosystems Engineering Technology**

## ADD NEW COURSE FOR GRADUATE CREDIT

**412 Surveying (3)** Measurement of landforms using radar, remote imagery, satellite real-time kinematics, and laser-based surveying instruments. Survey methods and mapping using GIS. Precision landform measurement of distances, angles, and areas; differential and profile leveling; topographic surveying and mapping; area computation.

*Contact Hour Distribution: 1 hour and one 3-hour lab.*

*Recommended background: college mathematics and computer literacy.*

**(345) Environmental and Soil Sciences**

## DROP FOR GRADUATE CREDIT

**444 Environmental Soil Physics (3)**

## ADD

**544 Environmental Soil Physics (3)** Basic understanding of soil physical properties and processes; influence of soil physical properties on water and chemical movement in soil; practical experience in the measurement and analysis of soil physical properties, water flow, and chemical movement in soil.

*Credit Restriction: Students cannot receive credit for both 444 and 544.*

*Recommended Background: General soils and physics.*

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

## REVISE TITLE

**514 Methods of Soil Physical Analysis (3)**

## REVISE TITLE, DESCRIPTION, RECOMMENDED BACKGROUND AND REMOVE CONTACT HOUR DISTRIBUTION

**511 Soil-Plant Nutrient Cycling in Managed Ecosystems (3)** Principles of nutrient cycling and soil exchange processes affecting nutrient availability to plants; management of soil nutrients to optimize crop growth; environmental implications of nutrient management; effects of both traditional and non-traditional nutrient amendments; and constraints to measuring plant-available nutrients in the soil.

*Recommended Background: Soil fertility course.*

## REVISE CREDIT HOURS

**613 Advanced Topics in Soil Chemistry and Fertility (3)**

**614 Advanced Topics in Soil Biology and Biochemistry (3)**

**615 Advanced Topics in Soil Physics, Genesis, and Morphology (3)**

**DEPARTMENT OF ENTOMOLOGY AND PLANT PATHOLOGY****(341) Entomology and Plant Pathology**

ADD

**552 Insect Morphology (3)** Identification of insect structures and relevance of structures to insect development, survival, physiology, and classification.

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

*Registration Restriction: Students cannot receive credit for both 552 and 652.*

**560 Advanced Integrated Pest Management (2)** Practical applications of the ecological principles and concepts of pest management as related by practitioners and experts; field trips required.

*Contact Hour Distribution: 2 hours lecture.*

**603 Research Planning (1-15)** Preliminary research and investigation of dissertation research topic.

*Repeatability: May be repeated. Maximum 15 hours.*

*Grading Restriction: Satisfactory/No Credit grading only.*

**652 Insect Morphology (3)** Identification of insect structures and relevance of structures to insect development, survival, physiology, and classification.

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

*Credit Restriction: Students cannot receive credit for 552 and 652.*

*Registration Restriction(s): Minimum student level - doctoral.*

REVISE CREDIT HOURS

**523 Field Crop and Vegetable Insects (3)**

REVISE TITLE

**555 Basal Hexapods****DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY****(390) Food Science and Technology**

ADD

**504 Research Planning (1-3)** Preliminary research and investigation of thesis research topic.

*Grading Restriction: Satisfactory/No credit grading only.*

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

*Credit Restriction: May not be used toward degree requirements.*

**603 Research Planning (1-6)** Preliminary research and investigation of dissertation research topic, and preparation of a research proposal.

*Grading Restriction: Satisfactory/No credit grading only.*

*Repeatability: May be repeated. Maximum 18 hours.*

*Credit Restriction: May not be used toward degree requirements.*

REVISE TITLE, CREDIT HOURS AND REMOVE CONTACT HOUR DISTRIBUTION

**515 Advanced Food Chemistry (3)**

ADD REPEATABILITY AND REQUEST APPROVAL FOR VARIABLE TITLE

**615 Food Biopolymers (3)**

*Repeatability: May be repeated. Maximum 9 hours.*

**DEPARTMENT OF FORESTRY, WILDLIFE AND FISHERIES****(396) Forestry**

REVISE DESCRIPTION AND GRADING (FROM S/NC TO LETTER GRADE)

**512 Seminar (1)** Current developments in forestry. All M.S. students must complete the course twice during their program.



**(398) Forestry, Wildlife and Fisheries**

ADD

**592 Off-Campus Research (1-15)***Repeatability: May be repeated. Maximum 15 hours.***603 Research Planning (1-15)** Preliminary research and investigation of dissertation research topic.*Repeatability: May be repeated. Maximum 21 hours.*

REVISE TITLE

**610 Interdisciplinary Analysis of Natural Resource Problems (2)**

REVISE TITLE, DESCRIPTION, AND REPEATABILITY

**612 Seminar in Natural Resources (1)** Current issues and developments in natural resources. All natural resource doctoral students must complete 612 twice during their program of study.*Repeatability: May be repeated. Maximum 2 hours.***(993) Wildlife and Fisheries Science**

REVISE DESCRIPTION, GRADING (FROM S/NC TO LETTER GRADE), AND ADD COMMENTS

**512 Seminar in Wildlife and Fisheries Science (1)** Current developments in wildlife and fisheries science.*Comments: All master's students must complete the course twice during their program.*

REVISE TO ADD CREDIT RESTRICTION

**531 Wildlife Physiology and Nutrition***Credit Restriction: Students cannot receive credit for both 431 and 531.***DEPARTMENT OF PLANT SCIENCES****(791) Plant Sciences**

ADD EXISTING COURSE FOR GRADUATE CREDIT

**470 Professional Practices for the Green Industry (3)** Professionalism, sales, sales proposals, budgeting, managerial skills, estimating, specifications, and contract management in the turf, public horticulture, and landscaping professions.

ADD NEW COURSE FOR GRADUATE CREDIT

**475 Professional Issues in Bioenergy (3)** Study and discussion of professional issues and practices in the bioenergy field, including economics, policy, engineering, processing, agronomy, biotechnology.

ADD PRIMARY COURSE AND CROSS LIST

**525 Research Ethics for the Life Sciences (1)** How good research conduct and knowing the rules of science can enable success in life science research. Bioethics is not a focus. *(Same as Animal Science 525.)**Contact Hour Distribution: 1 hour.*

DROP FOR GRADUATE CREDIT

**454 Plant Biotechniques (3)**

ADD

**554 Plant Biotechniques (3)** Lectures will discuss recombinant DNA technology, molecular assisted breeding of economically important crops, gene cloning and transformation technologies. Examples will be given of food and ornamental crops, pharmaceuticals, and renewable energy sources produced using biotechnology as well as potential risks of this technology. Labs will include electrophoresis, tissue culture, plasmid preps, genomic DNA preps, PCR, plant transformation, genomic techniques.*Contact Hour Distribution: 1-hour lecture and one 3-hour lab.**Credit Restriction: Students cannot receive credit for both 454 and 554.**(DE) Prerequisite(s): 353 or Biology 240.***EQUIVALENCY TABLE**

<b>Current (791) Plant Sciences Course</b>	<b>Equivalent (791) Plant Sciences Course Fall 2008</b>
454	554

**602 Research Planning (1-9)** Preliminary research and investigation of dissertation research topic.

*Repeatability: May be repeated. Maximum 9 hours.*

*Grading Restriction: Satisfactory/No Credit grading only.*

**610 Advanced Plant Genomics (2)** Journal club format emphasizing active class participation as a mechanism to explore the field of plant genomics. Each student will be required to lead the exploration of specific topics and will present a combination of three lectures and/or journal club discussions on the assigned topic.

REVISE TITLE, DESCRIPTION, AND ADD COMMENTS

**505 Professional Development and Presentation Skills (1)** Introduction to style, content and format guidelines for preparing formal presentations to scientific and professional peers. Preparation of abstracts and discussion of strategies and opportunities leading to development of young academic professional acumen.

*Comments: Taken the first semester offered after beginning MS (or PhD) studies in plant sciences.*

REVISE TITLE

**448 Horticultural Internet Communication**

REVISE CREDIT HOURS

**436 Plant and Garden Photography (3)**

REVISE CREDIT HOURS, REMOVE CONTACT HOUR DISTRIBUTION, AND (DE) PREREQUISITE

**435 Field and Forage Crops (3)**

REVISE REPEATABILITY

**504 Seminar (1)**

*Repeatability: May be repeated. Maximum 3 hours*

## **II. PROGRAM CHANGES**

### **DEPARTMENT OF AGRICULTURAL ECONOMICS**

- ADD THE FOLLOWING CONCENTRATION – AGRICULTURAL ECONOMICS MAJOR – MS  
Natural Resource Economics

REVISE REQUIREMENTS – AGRICULTURAL ECONOMICS MAJOR – MS

On page 40 of the 2007-2008 *Graduate Catalog*, right column, Requirements Section, add the new concentration to the end of the first sentence.

...with a concentration in agricultural economics or natural resource economics.

Formerly: ...with a concentration in agricultural economics.

REVISE THESIS OPTION – AGRICULTURAL ECONOMICS CONCENTRATION

On page 40 of the 2007-2008 *Graduate Catalog*, right column, revise 4<sup>th</sup> sentence to change 6 hours to 3 hours.

In the thesis option, 16 hours of agricultural economics, 3 hours of economic theory...

Formerly: In the thesis option, 16 hours of agricultural economics, 6 hours of economic theory...

ADD HEADING AND REQUIREMENTS FOR THE NEW NATURAL RESOURCE ECONOMICS CONCENTRATION

On page 40 of the 2007-2008 *Graduate Catalog*, right column, bottom of page, insert heading and requirements for the Natural Resource Economics concentration before the Agricultural Economics Minor.

#### **NATURAL RESOURCE ECONOMICS CONCENTRATION**

The natural resource economics concentration is designed to prepare students for analytical and research careers in the public and private sectors with emphasis on natural resource economics and to prepare students interested in entering a PhD program. A candidate must complete a minimum of 31 hours of graduate credit in courses approved by the student's master's committee. At least 25 hours of graduate credit must be earned at or above the 500 level. Thirteen hours of agricultural economics, 3 hours of economic theory, 6 hours of quantitative methods, and 6 hours of thesis are required. Twelve hours of coursework must come from a set of directed electives designed to enhance skills in natural resource economics and/or spatial analysis. Each student must pass a final oral examination.

## REVISE NATURAL RESOURCES MAJOR - PHD

On page 41 of the 2007-2008 *Graduate Catalog*, delete current heading and text and replace with the following.

**DOCTOR OF PHILOSOPHY****NATURAL RESOURCES MAJOR****NATURAL RESOURCE ECONOMICS CONCENTRATION**

Students interested in pursuing doctoral studies in the area of natural resource economics may do so with a concentration in natural resource economics under the natural resources PhD major located administratively within the Department of Forestry, Wildlife and Fisheries (see Department of Forestry, Wildlife and Fisheries catalog entry for detailed information). The student's doctoral committee will assist the student in developing a program of graduate coursework that will meet the requirements for the natural resource economics concentration under the natural resources PhD major while drawing heavily from the Department of Agricultural Economics and the Department of Economics.

**REQUIREMENTS**

Complete 72 semester hours of graduate coursework beyond the bachelor's degree. Forty-eight hours must be in graduate coursework approved by the student's doctoral committee. Up to 24 hours of coursework completed for a master's degree may be applied to the 48-hour requirement. A minimum of 12 of the remaining 24 (or 30 of the 48 if no master's degree) hours must be graded A-F. A minimum of 6 hours must be taken in UT courses at the 600-level, exclusive of dissertation hours. Students are required to complete a minimum of 24 hours of Agricultural Economics 600, Doctoral Research and Dissertation.

Successfully complete Forestry, Wildlife, and Fisheries 601 (3 hours), 610 (2 hours), 612 (1 hour); and Agricultural Economics 520 (1 hour) or similar graduate-level course.

**Demonstrate competence in:**

- Microeconomic Theory by qualifying examination. Students must take this examination in the summer prior to their second year of study. Prior to taking the examination students must complete Economics 511 and Economics 512 for graduate credit or petition the Agricultural Economics faculty for exemption from these courses.
- Macroeconomic Theory by the completion of a three or more hour graduate-level course in Macroeconomics with a grade of B or better.
- Quantitative Methods by completion of Economics 581, Economics 582 and Economics 583 with grades of B or better, or by qualifying examination.
- Natural Resource Economics by comprehensive examination. Preparation for this comprehensive examination will require completion of Agricultural Economics 570, or equivalent, and Agricultural Economics 670.
- Environmental Economics by comprehensive examination or by comprehensive examination in another field related to natural resources, economics or agricultural economics approved by the student's doctoral committee. Preparation for this comprehensive examination will normally require completion of a sequence of two or more courses in the field of specialization.
- All coursework by oral comprehensive examination. The examination is scheduled by the student and administered by the student's doctoral committee when the student has completed all or nearly all of the coursework.

Written qualifying and comprehensive examinations will be given in August (during the week prior to the start of fall semester classes) and in January (during the week prior to the start of spring semester classes). Students must take the oral comprehensive examination during the first semester after passing all written qualifying and comprehensive examinations. Students are expected to take the required courses that prepare them for the written examinations and must take these examinations on their first offering after completing the recommended coursework. Students failing any qualifying or comprehensive examination must retake the examination the next time it is offered or they will receive a failing grade. Failing a qualifying or comprehensive examination for the second time will ordinarily result in dismissal from the program. A qualifying or comprehensive examination may be taken a third time with approval of the Agricultural Economics faculty. Students must file a petition with the Graduate Coordinator who will submit the petition to the faculty. Generally, extenuating circumstances are needed to warrant approval to take an examination a third time. Failing a qualifying or comprehensive examination for a third time will result in dismissal from the doctoral program.

Following formation of the student's doctoral committee, submit a written dissertation proposal to all members of the committee. The student's major professor will then arrange an oral defense of the proposal. The proposal should be submitted and defended no later than one semester after the student takes the Microeconomic Theory qualifying examination.

Complete a doctoral dissertation and pass an oral examination on the dissertation. The dissertation, in the form approved by the major professor, must be distributed to the committee at least two weeks before the examination. The examination must be scheduled through the Graduate School at least one week prior to the examination and must be conducted in university-approved facilities. The examination is announced publicly and is open to all faculty members. The defense of dissertation will be administered by all members of the doctoral committee after completion of the dissertation and all course requirements. This examination must be passed at least two weeks before the date of submission and acceptance of the dissertation by the Graduate School. The major professor must submit the results of the defense by the dissertation deadline.

**DEPARTMENT OF ENTOMOLOGY AND PLANT PATHOLOGY**

## REVISE REQUIREMENTS - PLANTS, SOILS AND INSECTS MAJOR - PHD

On page 46 of the 2007-2008 *Graduate Catalog*, right column, top of page, add to the end of the 2<sup>nd</sup> sentence.

...must be taken at the University of Tennessee, excluding Entomology and Plant Pathology 603.

Formerly: ...must be taken at the University of Tennessee.

**DEPARTMENT OF FORESTRY, WILDLIFE AND FISHERIES**

## ● ADD THE FOLLOWING CONCENTRATION – NATURAL RESOURCES MAJOR – PHD

Natural Resource Economics

## REVISE INTRODUCTORY PARAGRAPH – NATURAL RESOURCES MAJOR - PHD

On page 48 of the 2007-2008 *Graduate Catalog*, right column, top of page, add wildland recreation as an area of study and add a new sentence to the end of the paragraph as follows.

...human dimensions of natural resource management; wildland recreation; natural resource organization administration and management; wood sciences; and multidisciplinary natural resources management. An optional, formal concentration in natural resource economics is also available for interested students.

Formerly: ...human dimensions of natural resource management; natural resource organization administration and management; wood sciences; and multidisciplinary natural resources management.

## REVISE HEADING AND TEXT – NATURAL RESOURCES MAJOR – PHD

On page 48 of the 2007-2008 *Graduate Catalog*, right column, revise last heading to add Agricultural Economics 600 and revise second sentence to delete the word "two" and replace with "one" as follows.

**Forestry, Wildlife and Fisheries or Agricultural Economics 600 Doctoral Research and Dissertation (24 hours)**

At least one of the committee members must be from the Department of Forestry, Wildlife and Fisheries...

## ADD HEADING AND TEXT FOR THE NATURAL RESOURCE ECONOMICS CONCENTRATION – NATURAL RESOURCES MAJOR - PHD

On page 49 of the 2007-2008 *Graduate Catalog*, left column, insert the following before the Environmental Policy Minor.

**Natural Resource Economics Concentration**

Students interested in pursuing doctoral studies in the area of natural resource economics may do so with a concentration in natural resource economics. The student's doctoral committee will assist the student in developing a program of graduate coursework that will meet the requirements for the concentration under the natural resources PhD major, while drawing heavily from the Department of Agricultural Economics and the Department of Economics. (See Department of Agricultural Economics catalog entry for detailed information).

**DEPARTMENT OF PLANT SCIENCES**

## ● DROP THE FOLLOWING CONCENTRATIONS – PLANTS, SOILS, AND INSECTS MAJOR – PHD

Plant improvement  
Weed biology

## ● ADD THE FOLLOWING CONCENTRATIONS – PLANTS, SOILS, AND INSECTS MAJOR – PHD

Plant breeding  
Plant molecular genetics  
Weed science

## REVISE TO ADD THE MASTER OF LANDSCAPE ARCHITECTURE (MLA) LISTING TO THE MAJORS LIST

On page 49 of the 2007-2008 *Graduate Catalog*, right column, top of page, add the MLA to the major and degree listing.

MAJORS	DEGREES
Landscape Architecture	MLA
Plant Sciences	MS
Plant, Soils, and Insects	PhD

## REVISE REQUIREMENTS – PLANT SCIENCES MAJOR - MS

On page 50 of the 2007-2008 *Graduate Catalog*, left column, 2<sup>nd</sup> bullet, delete current text and replace with:

Successful completion of 12 hours of coursework in the major at the graduate level (400 or above), exclusive of Plant Sciences 502 and 503. Two of these hours must be Plant Sciences 504 and 505. With agreement of the graduate student's committee, six of these hours may be satisfied by Art 481; Biochemistry and Cellular and Molecular Biology 404, 522, 523; Cultural Studies in Education 560; Ecology and Evolutionary Biology 414, 433, 560; Environmental and Soil Sciences 434, 544, 511, 516; Geography 439; Information Sciences 560; or Sociology 633.

## REVISE INTRODUCTORY PARAGRAPH – PLANTS, SOILS, AND INSECTS MAJOR - PHD

On page 50 of the 2007-2008 *Graduate Catalog*, 1<sup>st</sup> paragraph, delete first sentence and replace with:

The Doctor of Philosophy with a major in plants, soils, and insects and concentrations in crop sciences, horticulture, plant breeding, plant molecular genetics, and weed science is offered under a multi-departmental doctoral program.

## REVISE REQUIREMENTS – PLANTS, SOILS, AND INSECTS MAJOR - PHD

On page 50 of the 2007-2008 *Graduate Catalog*, 2<sup>nd</sup> paragraph, delete 5<sup>th</sup> sentence and replace with:

At least 9 hours of the student's coursework must be from outside the plants, soils and insects major, and a minimum of 6 hours of courses numbered 601 or higher must be taken at the University of Tennessee, excluding Plant Sciences 602.

Formerly: At least 9 hours of the student's coursework must be from outside the plants, soils and insects major, and a minimum of 6 hours must be taken in courses numbered 601 or higher at the University of Tennessee.

## REVISE REQUIREMENTS – PLANTS, SOILS, AND INSECTS MAJOR - PHD

On page 50 of the 2007-2008 *Graduate Catalog*, 5<sup>th</sup> paragraph, delete current sentence and replace with:

PhD students must enroll in 3 hours of Plant Sciences 504. Presentation of at least two departmental seminars, in addition to an exit seminar (not credited as PS 504) are required.

**COLLEGE OF ARTS AND SCIENCES****All changes effective Fall 2008****I. COURSE CHANGES****DEPARTMENT OF ANTHROPOLOGY****(122) ANTHROPOLOGY****ADD NEW COURSES FOR GRADUATE CREDIT**

**454 Archaeology of The African Diaspora (3)** Historical archaeology of African, North American and Latin American sites relating to the transatlantic slave trade and the experiences of enslaved Africans in the New World from the 15th to the 19th centuries.

*(DE) Prerequisite(s): 120 or 127.*

*Recommended Background: 361.*

**461 Archaeological Resource Management (3)** Federal legislation and regulations affecting identification, protection, and management of archaeological resources. Professional ethics and responsibilities and relationship of federal and state agencies, public interest groups, and professional archaeologists in conduct of federally sponsored archaeology.

**466 Archaeology of Southeastern United States (3)** Archaeological research on prehistoric American Indian cultures in Southeastern United States.

**DROP**

**561 Archaeological Resource Management (3)**

**564 Archaeology of Southeastern United States (3)**

**EQUIVALENCY TABLE**

<b>Current (122) Anthropology Course</b>	<b>Equivalent (122) Anthropology Course Fall 2008</b>
561	461
564	466

**SCHOOL OF ART****(140) Art****ADD**

**503 Theory and Practice of Art Fundamentals (1)** Required for all GTA's. Surveys art theory and practice as it relates to teaching art foundations. Practical instruction, professional development, and pedagogy will be introduced in the form of lectures, group discussions, readings and project development.

**(135) ART CERAMICS****REVISE REPEATABILITY**

**421 Ceramics: Advanced Handbuilding (6)**

*Repeatability: May be repeated. Maximum 18 hours.*

**422 Ceramics: Advanced Throwing (6)**

*Repeatability: May be repeated. Maximum 18 hours.*

**DEPARTMENT OF AUDIOLOGY AND SPEECH PATHOLOGY****(160) Audiology and Speech Pathology**

ADD

**510 Clinical Education Seminar in Audiology (1)** Seminar provides a forum for deliberation on issues impacting audiology practice in a variety of clinical and educational settings to help the graduate student clinician transition to their independent practice roles.

*Repeatability: May be repeated. Maximum 6 hours.*

*(DE) Corequisite(s): 512 or 515.*

REVISE CREDIT HOURS

**545 Sound Measurement Techniques and Hearing Conservation (2)**

REVISE CREDIT HOURS AND ADD CONTACT HOUR DISTRIBUTION:

**576 Physiologic Assessment of the Auditory System (4)**

*Contact hour distribution: 3 hours lecture and 1 hour lab.*

**DEPARTMENT OF BIOCHEMISTRY AND CELLULAR AND MOLECULAR BIOLOGY****(188) Biochemistry and Cellular and Molecular Biology**

REVISE (DE) PREREQUISITES AND ADD CONTACT HOUR DISTRIBUTION

**403 Advanced Genetics Laboratory (3)**

*Contact Hour Distribution: Laboratory and lecture.*

*(DE) Prerequisite(s): Biology 240 and Chemistry 360.*

REVISE CREDIT HOURS AND (DE) PREREQUISITES

**404 Plant Molecular Biology (3)**

*(DE) Prerequisite(s): Biology 240.*

REVISE CREDIT HOURS

**530 Experimental Design and Analysis (3)**

REVISE RECOMMENDED BACKGROUND, REMOVE CONTACT HOUR DISTRIBUTION, AND ADD CROSS-LISTING OF PRIMARY COURSE

**552 Physiology of Hormones (3)** *(Same as Animal Science 556.)*

*Recommended Background: 402, 440 or equivalent courses.*

**DEPARTMENT OF CHEMISTRY****(235) Chemistry**

DROP

**554 Organic Spectroscopy Laboratory (1)**

REVISE TITLE AND DESCRIPTION

**552 Applications of Organic Reactions (3)** Applications of organic reactions to directed synthesis targets including bio-organic substrates, natural products, medicinal agents, or other molecules of practical or theoretical interest.

REVISE CREDIT HOURS

**553 Spectroscopic Characterization of Organic Compounds (3)**

**DEPARTMENT OF CLASSICS****(257) Classics**

## ADD NEW COURSE FOR GRADUATE CREDIT

**445 Ancient and Medieval Seafaring (3)** Survey of seafaring in the Mediterranean and northern Europe from its very beginning, c. 11,000 BCE, until the late Middle Ages. Discussion of shipwrecks, iconographic evidence, and texts. Emphasis on ship construction and the evidence it provides about seafaring, naval warfare, technology, the exploitation of natural resources, levels of labor, social differences in society, and changes in the economy.

## ADD

**572 Latin Paleography (3)** Introduction to the Latin hands used in Western Europe from the Roman through the Humanistic period, when most writing in the West was in Latin. Focus is on identifying and dating hands and on transcribing them accurately. Discussions, student presentations, examinations, papers.

*(DE) Prerequisite(s): 431, 432, or 435.*

## ADD AND REQUEST APPROVAL FOR VARIABLE TITLE

**571 Special Topics in Medieval Latin Literature (3)** Selected topics in Medieval Latin literature. Discussions, student presentations, examinations, papers.

*Repeatability: May be repeated. Maximum 9 hours.*

*(DE) Prerequisite(s): 431, 432, or 435.*

**FORMER DEPARTMENT OF COMPUTER SCIENCE (SEE COLLEGE OF ENGINEERING)**

## MEMORANDUM

To: UT Faculty and Staff  
From: Robert Holub, Provost and Vice Chancellor for Academic Affairs  
Subject: Merger of Computer Science and Electrical and Computer Engineering  
Date: Nov. 17, 2006

It gives me great pleasure to announce the merger of the Department of Computer Science and the Department of Electrical and Computer Engineering. The new department, which will be named the Department of Electrical Engineering and Computer Science, will reside in the College of Engineering. It will provide new perspectives on computational science and open up novel and exciting possibilities for creative work.

The faculties of each of these departments have already agreed in principle to approve the merger, which will officially take place on July 1, 2007. Committees consisting of members from both former departments have been hard at work ironing out the details. The departments and the entire faculty owe a great debt of thanks to the merger committee that has worked so hard to organize this union and to keep it on track.

I am certain that the existence of Electrical Engineering and Computer Science signals a new day for computational sciences on the Knoxville campus. I look forward to working with Dean Way Kuo and with the new unit to make certain that the transition is accomplished smoothly.

**(266) Computer Science**

MOVE ACADEMIC DISCIPLINE (266) COMPUTER SCIENCE AND COURSES FROM THE DEPARTMENT OF COMPUTER SCIENCE (COLLEGE OF ARTS AND SCIENCES) TO THE DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE (COLLEGE OF ENGINEERING)

**DEPARTMENT OF EARTH AND PLANETARY SCIENCES****(424) Geology**

## ADD

**580 Planetary Science (3)** Broad survey in planetary science. Emphasis on fundamental physical principles, quantitative problem solving, and canonical derivations in planetary science. Topics include orbital dynamics, heating and energy transport, atmospheric physics and chemistry, planetary surface processes, planetary interiors, origin and evolution of the solar system, and extrasolar planets.

*Registration Permission: Consent of instructor.*

**680 Seminar in Planetary Science (3)**

*Repeatability: May be repeated. Maximum 9 hours.*

*Registration Permission: Consent of instructor.*



REVISE TO ADD REPEATABILITY

**595 Selected Topics in Geology (1)**

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

**DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY**

**(278) Ecology and Evolutionary Biology**

ADD NEW COURSE FOR GRADUATE CREDIT

**426 Plant-Animal Interactions (3)** Introduction to the evolutionary and ecological aspects of interactions between plants and animals, including herbivory, pollination, and seed dispersal. Emphasis is on historical development of the field, discussions of primary literature, design of experiments, and writing.

*(DE) Prerequisite(s): Biology 250.*

DROP

**412 Minicourse in Ecology and Evolutionary Biology (2)**

REVISE TITLE OF SECONDARY CROSS-LISTED COURSE

**546 Evolutionary Psychology (3)** *(See Psychology 546.)*

**DEPARTMENT OF ENGLISH**

**(339) English**

REVISE CROSS-LISTING OF PRIMARY COURSE

**490 Language and the Law (3)** *(Same as Linguistics 490.)*

REVISE PRIMARY COURSE TO REMOVE CROSS-LISTING

**496 The Rhetoric of Legal Discourse (3)**

**DEPARTMENT OF GEOGRAPHY**

**(415) Geography**

ADD NEW COURSE FOR GRADUATE CREDIT

**451 The Global Economy (3)** Global patterns of industries and markets. International flow of resources, goods, and capital. Major trading blocs.

**EQUIVALENCY TABLE**

Current Geography Course	Equivalent Geography Course Effective Fall 2008
<b>351</b>	<b>451</b>

REVISE CONTACT HOUR DISTRIBUTION

**432 Dendrochronology (4)**

*Contact Hour Distribution: 3 hours lecture and 2 hours lab.*

REVISE TITLE, DESCRIPTION, REPEATABILITY, AND PREREQUISITE

**541 Topics in Urban/Economic Geography (3)** Analysis of research on urban systems, internal morphology, urban problems, urban spatial behavior, and regional economic development.

*Repeatability: May be repeated with consent of instructor. Maximum 9 hours.*

*(DE) Prerequisite(s): 340 or 441.*

REVISE TITLE AND REPEATABILITY

**641 Seminar in Urban/Economic Geography (3)**

*Repeatability: May be repeated. Maximum 9 hours.*

**DEPARTMENT OF HISTORY****(462) History**

ADD AND REQUEST APPROVAL FOR VARIABLE TITLE

**529 Topics in Late-Antique/Early-Medieval History (3)** Reading seminar: European history, c. 200-600 CE. Focus varies.

*Repeatability: May be repeated. Maximum 15 hours.*

**530 Topics in Medieval History (3)** Reading Seminar: European history, c. 600-1400 CE. Focus varies.

*Repeatability: May be repeated. Maximum 15 hours.*

**563 Topics in African History (3)** Reading Seminar: Africa. Focus varies.

*Repeatability: May be repeated. Maximum 15 hours.*

**629 Seminar in Late-Antique/Early-Medieval History (3)** Research seminar on primary sources culminating in a scholarly paper in European history, c. 200-600 CE. Focus varies.

*Repeatability: May be repeated. Maximum 15 hours.*

**630 Seminar in Medieval History (3)** Research seminar in primary sources culminating in a scholarly paper on European history, c. 600-1400 CE. Focus varies.

*Repeatability: May be repeated. Maximum 15 hours.*

REVISE TITLE, DESCRIPTION AND REQUEST APPROVAL FOR VARIABLE TITLE

**531 Topics in 15<sup>th</sup>- and 16<sup>th</sup>- Century European History (3)** Reading seminar: 15<sup>th</sup>- and 16<sup>th</sup>- century movements and trends.

**631 Topics in 15<sup>th</sup>- and 16<sup>th</sup>- Century European History (3)** Research seminar in primary sources culminating in a scholarly paper in 15<sup>th</sup>- and 16<sup>th</sup>- century European history. Focus varies.

REVISE DESCRIPTIONS TO REMOVE THE WORDS "SECONDARY SOURCES ON" FOR EACH COURSE

**532 Topics in Modern Europe (3)** Reading seminar: movements and trends multinational in focus. Focus varies.

**533 Topics in European National History (3)** Reading seminar: intra-national topics; usually British, Russian, German, or French. Focus varies.

**541 Topics in Early American History (3)** Reading seminar. Focus varies.

**542 Topics in 19<sup>th</sup>-Century United States (3)** Reading seminar. Focus varies.

**543 Topics in 20<sup>th</sup>-Century United States (3)** Reading seminar. Focus varies.

**544 Topics in U.S. Environmental History (3)** Reading seminar. Focus varies.

**551 Topics in the History of Foreign Relations (3)** Reading seminar. Focus varies.

**552 Topics in Military History (3)** Reading seminar: military history, military operations, social impact of war, and naval strategy in foreign policy.

**555 Topics in United States Social and Economic History (3)** Reading seminar. Focus varies.

**556 Topics in European Social and Economic History (3)** Reading seminar: social or economic history of European nations. Focus varies.

**557 Topics in Cultural and Intellectual History (3)** Reading seminar. Focus varies.

**558 Topics in United States Regional and Local History (3)** Reading seminar: regions, states and cities of the South.

**559 Topics in Jewish History (3)** Reading seminar. Focus varies.

**561 Topics in Latin American History (3)** Reading seminar. Focus varies.

**562 Topics in Asian History (3)** Reading seminar: Asian history; East Asia and Middle East. Focus varies.

**580 Topics in History (3)** Reading seminar. Focus varies.

**INTERDISCIPLINARY PROGRAMS****(617) Legal Studies**

DROP ACADEMIC DISCIPLINE AND ALL COURSES

**430 United States Constitutional Law: Sources of Power and Restraint (3)** *(See Political Science 430.)***431 United States Constitutional Law: Civil Rights and Liberties (3)** *(See Political Science 431.)***435 Criminal Law and Procedure (3)** *(See Political Science 435.)***442 Administrative Law and Regulatory Policymaking (3)** *(See Political Science 442.)***445 Administration of Justice (3)** *(See Political Science 445.)***451 Criminal Justice (3)** *(See Sociology 451.)***455 Society and Law (3)** *(See Sociology 455.)***490 Language and Law (3)** *(See English 490.)***496 The Rhetoric of Legal Discourse (3)** *(See English 496.)***(994) Women's Studies**

ADD FOR GRADUATE CREDIT SECONDARY CROSS-LISTED COURSE

**454 Gender and Crime (3)** *(See Sociology 453.)***DEPARTMENT OF MATHEMATICS****(641) MATHEMATICS**

ADD NEW COURSE FOR GRADUATE CREDIT

**467 Honors: Topology (3)** Includes topology of line and plane, separation properties, compactness, connectedness, continuous functions, homeomorphisms, continua, and topological invariants.  
*(DE) Prerequisite(s): 300 and 241 or 247.*

DROP

**461 Topology (3)****EQUIVALENCY TABLE**

<b>Current Mathematics Course</b>	<b>Equivalent Mathematics Course Effective Fall 2008</b>
<b>(641) 461</b>	<b>(641) 467</b>

ADD AND REQUEST APPROVAL FOR VARIABLE TITLE

**590 Seminar in Teaching College Mathematics (1-3)** Selected topics in research, theory, and techniques for teaching collegiate mathematics.*Repeatability: May be repeated. Maximum 12 hours.**Credit Restriction(s): May not be applied toward mathematics major (Master of Science).**Registration Permission: Consent of department head.*

ADD

**674 Advanced Topics in Numerical Partial Differential Equations II (3)** Continuation of 673.*Repeatability: May be repeated. Maximum 12 hours.**(DE) Prerequisite(s): 673.*

REVISE TITLE

**673 Advanced Topics in Numerical Partial Differential Equations I (3)**

**DEPARTMENT OF MICROBIOLOGY****(684) Microbiology**

ADD

**594 Grant Writing (3)** Readings and description of scientific ethics and grant writing.**680 Foundations in Microbiology (3)** Readings and discussions of historically relevant research contributions to microbiology.

REVISE GRADING (FROM S/NC TO LETTER GRADE), AND CREDIT HOURS

**596 Laboratory Rotation (3)**

REVISE PRIMARY COURSE TO ADD CROSS-LISTING

**620 Topics in Microbial Pathogenesis (1-3)** (*Same as Animal Science 620.*)**DEPARTMENT OF MODERN FOREIGN LANGUAGES AND LITERATURES****(686) Modern Foreign Languages and Literatures**

ADD

**512 Teaching a Foreign Language (3)** Practical application of methods for teaching and evaluating basic language skills and foreign language skills, and cultural knowledge through seminars, demonstrations, peer teaching, and observation of foreign language classes. Required of all MA and PhD students holding Graduate Teaching Assistantships, except those whose previous training or experience warrants their being excused by the department.**(405) FRENCH**

DROP

**512 Teaching a Foreign Language (3)**

REVISE DESCRIPTION AND ADD (DE) PREREQUISITE(S)

**432 Contemporary French Culture (3)** Current French cultural issues placed in historical perspective with a comparative emphasis.*(DE) Prerequisite(s): 351 or 352.*

REVISE PRIMARY COURSE TO ADD CROSS-LISTING

**515 Technology Enhanced Language Learning (3)** (*Same as German 515; Spanish 515.*)**(433) German**

ADD AND CROSS-LIST SECONDARY COURSE

**515 Technology Enhanced Language Learning (3)** (*See French 515.*)

DROP

**512 Teaching a Foreign Language (3)**

REVISE REPEATABILITY

**550 Studies in German Literature (3)***Repeatability: May be repeated. Maximum 9 hours.*

REVISE TO ADD REPEATABILITY

**561 Directed Readings in German Language and Literature (3)***Repeatability: May be repeated. Maximum 9 hours.***562 Directed Readings in German Language and Literature (3)***Repeatability: May be repeated. Maximum 9 hours.*

**631 Seminar in German and Germanic Philology (3)**

*Repeatability: May be repeated. Maximum 18 hours.*

**632 Seminar in German and Germanic Philology (3)**

*Repeatability: May be repeated. Maximum 18 hours.*

REQUEST APPROVAL FOR VARIABLE TITLE

**420 Selected Topics in German Literature from 1750 to the Present (3)****552 German Enlightenment, Rococo, and Sturm und Drang (3)****553 German Classicism and Romanticism (3)****554 German Realism and Naturalism (3)****555 Modern German Literature 1890-1945 (3)****556 Modern German Literature 1945-Present (3)****593 Independent Study (1-15)****(584) Italian**

REVISE TO ADD REPEATABILITY AND COMMENTS

**422 Topics in Italian Cinema (3)**

*Repeatability: May be repeated. Maximum 6 hours.*

*Comment(s): Open to non-majors. Majors will read texts and write papers in Italian.*

**(924) Spanish**

ADD NEW COURSE FOR GRADUATE CREDIT

**420 Applied Linguistics (3)** Introduction to applied linguistics, with a special emphasis on the theoretical and practical aspects of the teaching of Spanish as a foreign language. Fundamental concepts in linguistics within the context of Spanish grammar and their use in the study of second language acquisition, foreign language learning and foreign language teaching. Conducted in Spanish, with readings in both English and Spanish.

*(DE) Prerequisite(s): 323.*

ADD SECONDARY CROSS-LISTED COURSE

**515 Technology Enhanced Language Learning (3) (See French 515.)**

DROP

**512 Teaching a Foreign Language (3)****SCHOOL OF MUSIC****(713) Music Performance**

REVISE TITLE

**440 Euphonium (1-3)****441 Euphonium (1-3)**

REVISE TITLE AND REPEATABILITY

**540 Euphonium (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

REVISE REPEATABILITY

**503 Flute (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**505 Oboe (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**510 Bassoon (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**515 Clarinet (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**520 Saxophone (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**525 Horn (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**530 Trumpet (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**535 Trombone (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**545 Tuba (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**550 Percussion (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**551 Accompanying and Coaching (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**555 Voice (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**560 Violin (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**565 Viola (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**570 Cello (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**572 Electric Bass (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**575 String bass (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**580 Piano (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**583 Guitar (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**585 Harpsichord (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**590 Organ (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**594 Composition (1-3)**

*Repeatability: May be repeated. Maximum 16 hours.*

**595 Composition with Electronic Media (1-3)**

*Repeatability: May be repeated. Maximum 16 hours.*

**599 Improvisation (1-4)**

*Repeatability: May be repeated. Maximum 16 hours.*

**DEPARTMENT OF PHILOSOPHY****(745) Philosophy**

ADD NEW COURSES FOR GRADUATE CREDIT

**460 Topics in Philosophy of Science (3)**

*Repeatability: May be repeated if topic differs. Maximum 6 hours.*

*Recommended Background: 6 hours of philosophy courses.*

**480 Topics in Metaphysics and Epistemology (3)**

*Repeatability: May be repeated if topic differs. Maximum 6 hours.*

*Recommended Background: 6 hours of philosophy courses.*

ADD AND REQUEST APPROVAL FOR VARIABLE TITLE

**560 Topics in the Philosophy of Science (3)**

*Repeatability: May be repeated. Maximum 9 hours.*

**DEPARTMENT OF POLITICAL SCIENCE****(801) Political Science**

REVISE PRIMARY COURSE TO DELETE CROSS-LISTING WITH LEGAL STUDIES

**430 United States Constitutional Law: Sources of Power and Restraint (3)****431 United States Constitutional Law: Civil Rights and Liberties (3)****435 Criminal Law and Procedure (3)****442 Administrative Law and Regulatory Policymaking (3)****445 Administration of Justice (3)****DEPARTMENT OF PSYCHOLOGY****(830) Psychology**

ADD NEW COURSE FOR GRADUATE CREDIT

**435 Multicultural Psychology (3)** Issues of race, ethnicity, socioeconomic status, gender, spirituality, sexual orientation, and ability level as related to the theory, research, and practice of psychology will be examined. Focus will be on increasing personal self-awareness and knowledge of multicultural issues.

*(DE) Prerequisite: 110.*

ADD

**524 Brain and Behavioral Development (3)** Survey of experience-dependent changes in brain and behavior development.

*Registration Permission: Consent of instructor.*

**530 Psychology of Attitudes (3)** Survey of core topics on attitude formation, change, and measurement; roles of automatic and controlled processes, affect, cognition, and behavior in a variety of attitude domains.

*Registration Permission: Consent of instructor.*

REVISE TITLE AND DESCRIPTION

**527 Behavioral Neuroscience (3)** Advanced analysis of functional neural systems involved in the regulation of behavior.

**570 Personality: Personality, Cognition and Affect (3)** Survey of current theoretical and empirical literature on the determinants of individual differences including cognitive (e.g., self-efficacy, schemas, attributions) and affective (e.g., information-processing, emotion regulation, inhibition of emotion) processes.

REVISE TITLE AND DESCRIPTION OF PRIMARY CROSS-LISTED COURSE

**546 Evolutionary Psychology (3)** Advanced analysis of the ecological and evolutionary bases of behavior. (*Same as Ecology and Evolutionary Biology 546.*)

**DEPARTMENT OF SOCIOLOGY****(915) Sociology**

ADD NEW COURSE FOR GRADUATE CREDIT

**463 Community Sociology (3)** The environment shapes human interactions and human interactions shape the construction of environments. Explores how individuals construct and participate in communities.

ADD

**631 Advanced Quantitative Methods (3)** Advanced multivariate analysis using computer software applications. Emphasis on regression techniques including ordinary least squares, logistic, ordered logic, and multinomial logistic. Introduction to other advanced techniques such as path analysis, multilevel modeling, and cluster analysis.

REVISE PRIMARY COURSE TO REMOVE CROSS-LISTING WITH LEGAL STUDIES

**451 Criminal Justice (3)**

**455 Society and Law (3)**

REVISE TITLE

**452 Race, Ethnicity, Crime, and Justice (3)**

REVISE PRIMARY COURSE TO ADD CROSS LISTING

**453 Gender and Crime (3)** (*Same as Women's Studies 454.*)

**DEPARTMENT OF THEATRE****(976) Theatre**

ADD NEW COURSE FOR GRADUATE CREDIT

**484 Photography for the Theatre (3)** Digital photography techniques for shooting live performance events under challenging lighting environments.  
*Registration Permission: Consent of instructor.*

ADD

**515 Alexander Technique (1-3)** Individual tutorials in the use and practice of the Alexander Technique.  
*Repeatability: May be repeated. Maximum 18 hours.*  
*Comment(s): For graduate actors only.*

DROP

**454 Scenery Painting (2)**

**462 Lighting Design II (3)**

REVISE TITLE

**450 Special Topics in Design and Technology (1-3)**

**520 Master Class in Acting (3)**

**523 Master Class in Movement (3)**

**525 Master Class in Voice (3)**

REVISE TITLE, DESCRIPTION, AND REPEATABILITY AND REQUEST APPROVAL FOR VARIABLE TITLE

**550 Special Topics in Design and Technology, (1-3)**  
*Repeatability: May be repeated. Maximum 12 hours.*



**PART II: PROGRAM CHANGES****FORMER DEPARTMENT OF COMPUTER SCIENCE (SEE COLLEGE OF ENGINEERING)**

MOVE THE COMPUTER SCIENCE MAJOR (MS AND PHD) AND COMPUTER SCIENCE AND COMPUTATIONAL SCIENCE MINOR FROM THE DEPARTMENT OF COMPUTER SCIENCE (COLLEGE OF ARTS AND SCIENCES) TO THE DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE (COLLEGE OF ENGINEERING)

**MEMORANDUM**

To: UT Faculty and Staff  
From: Robert Holub, Provost and Vice Chancellor for Academic Affairs  
Subject: Merger of Computer Science and Electrical and Computer Engineering  
Date: Nov. 17, 2006

It gives me great pleasure to announce the merger of the Department of Computer Science and the Department of Electrical and Computer Engineering. The new department, which will be named the Department of Electrical Engineering and Computer Science, will reside in the College of Engineering. It will provide new perspectives on computational science and open up novel and exciting possibilities for creative work.

The faculties of each of these departments have already agreed in principle to approve the merger, which will officially take place on July 1, 2007. Committees consisting of members from both former departments have been hard at work ironing out the details. The departments and the entire faculty owe a great debt of thanks to the merger committee that has worked so hard to organize this union and to keep it on track.

I am certain that the existence of Electrical Engineering and Computer Science signals a new day for computational sciences on the Knoxville campus. I look forward to working with Dean Way Kuo and with the new unit to make certain that the transition is accomplished smoothly.

**DEPARTMENT OF EARTH AND PLANETARY SCIENCES****REVISE INTRODUCTORY PARAGRAPH**

On page 63 of the 2007-2008 *Graduate Catalog*, delete the second sentence of the paragraph and replace with:

Individuals interested in these programs should contact the Director of Graduate Admissions in the department and the faculty most closely related to the applicant's research interests for information and application procedures.

**REVISE ADMISSION TEXT**

On page 64 of the 2007-2008 *Graduate Catalog*, left column, top of page, Admissions heading, delete 2<sup>nd</sup> paragraph and replace with:

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 coursework 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.

**REVISE REQUIREMENTS SECTION - GEOLOGY MAJOR FOR BOTH MS AND PHD**

On page 64 of the 2007-2008 *Graduate Catalog*, left column, remove current requirements sections and replace with:

**MASTER OF SCIENCE  
GEOLOGY MAJOR****Requirements**

The department offers a thesis option in the master's program. Successful completion of the master's degree requires a minimum of 30 hours of approved graduate credit, including six hours of thesis credit, an approved written thesis proposal, successful oral defense of a written thesis, and a minimum 3.0 GPA in all graduate course work.

**DOCTOR OF PHILOSOPHY  
GEOLOGY MAJOR****Requirements**

Successful completion of the PhD requires a minimum of 24 hours of graded course work beyond that required for the master's degree, an additional 24 hours of dissertation credit, approval of a written dissertation proposal, completion of a comprehensive examination, and successful oral defense of a written dissertation. A minimum 3.0 GPA is required in all graduate course work, and taking courses from outside the department is encouraged. After a written dissertation proposal is approved, students are required to pass a comprehensive examination, which is usually taken by the end of the second year. The examination includes both written and oral components in which individuals are tested on their knowledge of their intended research area and related fields. The candidate is expected to be conversant across a wide range of the geological sciences. The written dissertation will demonstrate high-quality, original research by the student. Research results will be presented orally in a departmental seminar open to the public, and will be defended in a private defense restricted to the Dissertation Committee and interested departmental faculty.

**DEPARTMENT OF GEOGRAPHY****REVISE REQUIREMENTS SECTION - GEOGRAPHY MAJOR - MS**

On page 67 of the 2007-2008 *Graduate Catalog*, right column, bottom of page, delete the 3<sup>rd</sup> and 4<sup>th</sup> sentence and replace with the following:

The MS program requires students to have some familiarity with key themes and approaches in both physical and human geography. At least two-thirds of the total hours in the degree program must be at or above the 500 level and must include 415, 501 (at each offering during residency), 504, and 3 hours at the 600 level. In the thesis option, 6 hours must be Thesis 500. A final examination is required in both programs.

Formerly: The MS program requires students to have background in quantitative methods equivalent to the course content of Geography 415, and some familiarity with key themes and approaches in both physical and human geography. At least two-thirds of the total hours in the degree program must be at or above the 500 level and must include 501 (at each offering during residency), 504, and 3 hours at the 600 level.

**REVISE REQUIREMENTS SECTION - GEOGRAPHY MAJOR - PHD**

On page 68 of the 2007-2008 *Graduate Catalog*, left column, delete 2<sup>nd</sup> sentence and replace with:

The program must include 415, 504, 515, 599, 9 hours of 600-level seminars, and (at each offering during residency) 501.

Formerly: The program must include 504, 515, 599, 9 hours of 600-level seminars, and (at each offering during residency) 501.

**DEPARTMENT OF HISTORY****REVISE DOCTORAL FIELDS SECTION, GROUP II, EUROPEAN – HISTORY MAJOR - PHD**

On page 69 of the 2007-2008 *Graduate Catalog*, 2<sup>nd</sup> column, add "Gender" to the end of sentence as shown below:

European—Ancient; ...National Fields; Gender.

Formerly: European—Ancient; ... National Fields.

**INTERDISCIPLINARY PROGRAMS****LINGUISTICS****REVISE REQUIREMENTS FOR GRADUATE CERTIFICATE IN LINGUISTICS**

On page 70 of the 2007-2008 *Graduate Catalog*, left column, middle of page, revise 2<sup>nd</sup> bullet, additional courses by removing Linguistics 429.

**LIFE SCIENCES****REVISE CONCENTRATION – PLANT PHYSIOLOGY AND GENETICS**

On page 71 of the 2007-2008 *Graduate Catalog*, right column, 3<sup>rd</sup> paragraph, revise BCMB list of courses to:

Biochemistry and Cellular and Molecular Biology 511, 512; 522, 523;

Formerly: Biochemistry and Cellular and Molecular Biology 511, 512; 521, 522

**DEPARTMENT OF MICROBIOLOGY****REVISE REQUIREMENTS - MICROBIOLOGY MAJOR - MS**

On page 74 of the 2007-2008 *Graduate Catalog*, left column, delete current text and replace with the following:

The program leading to the MS is designed to provide the student with broad basic knowledge, to permit the acquisition of technical competence in the fundamentals of research, and to encourage creative and independent thinking. Two to three years are usually needed for the course of study.

Successful candidates for the Master of Science are expected to

- Complete course requirements as determined by the department and the student's faculty thesis research committee.
- Satisfactorily present and orally defend a research thesis.

**REVISE REQUIREMENTS - MICROBIOLOGY MAJOR - PHD**

On page 74 of the 2007-2008 *Graduate Catalog*, delete requirements heading and text and replace with the following:

Successful candidates for the Doctor of Philosophy are expected to

- Complete course requirements as determined by the department and the student's faculty dissertation research committee.
- Satisfactorily present and orally defend a research dissertation.

**DEPARTMENT OF MODERN FOREIGN LANGUAGES AND LITERATURES**

- ADD THE FOLLOWING AS A SECOND CONCENTRATION – MODERN FOREIGN LANGUAGES MAJOR - PHD  
Latin American Studies

**REVISE REQUIREMENTS – GERMAN MAJOR – MA – THESIS OPTION**

On page 75 of the 2007-2008 *Graduate Catalog*, left column, Thesis Option, 4<sup>th</sup> sentence, revise to:

All graduate teaching assistants should take Modern Foreign Languages and Literatures 512, and other candidates may take Modern Foreign Languages and Literatures 512 or any other course above 500.

Formerly: All graduate teaching assistants should take 512, and other candidates may take 512 or any other course above 500.

**REVISE REQUIREMENTS – GERMAN MAJOR – MA – NON-THESIS OPTION**

On page 75 of the 2007-2008 *Graduate Catalog*, left column, Non-Thesis Option, 4<sup>th</sup> sentence, revise to:

All graduate teaching assistants should take Modern Foreign Languages and Literatures 512, and other candidates may take Modern Foreign Languages and Literatures 512 or any other 500-level course.

Formerly: All graduate teaching assistants should take 512, and other candidates may take 512 or any other 500-level course.

**REVISE TEXT AND REQUIREMENTS – MODERN FOREIGN LANGUAGES MAJOR - PHD**

On page 75 of the 2007-2008 *Graduate Catalog*, right column, revise the introductory paragraph, as indicated below.

The PhD ...Spanish), applied linguistics or Latin American Studies.

Formerly: The PhD ...Spanish) or applied linguistics.

Page 75 of the 2007-2008 *Graduate Catalog*, right column, bottom of page, Tract II, delete current text and replace with:

- **Track II.** The coursework for Track II must be distributed in this way: at least 45 hours in the first concentration; at least 12 hours in the second concentration; and at least 6 hours in a cognate field or in either the first or second concentration as approved by the student's graduate committee. Students choosing Latin American Studies as their second concentration will take 6 graduate hours in an appropriate language area that is outside their primary concentration (either French, Portuguese, or Spanish), and in addition 12 graduate hours in Latin American Studies classes outside of the primary concentration.

**Please note:** Graduate students who select Track II and do not combine their cognate field (6 hours) and the field of the second concentration (12 hours) will normally not be eligible to teach their field of the second concentration at institutions which follow SACS guidelines for college foreign language teaching. SACS requires a minimum of 18 graduate credit hours for eligibility to teach a given field at the college level. Students who choose to combine the second concentration

(Track II) with the 6 hours in the cognate field will have a minimum of 18 hours in the field of the second concentration, and they will therefore be eligible to teach the field of the second concentration at institutions that follow SACS guidelines.

Page 76 of the 2007-2008 *Graduate Catalog*, left column, top of page, under First Concentration: German, 500 level, delete and replace with:

**500 level** – A minimum of 21 hours must be taken. These must include Modern Foreign Languages and Literatures 512, German 519 and 560. Thesis hours are excluded. If Modern Foreign Languages and Literatures 512 is used as part of a second concentration in applied linguistics, another course must be substituted in the first concentration.

Page 76 of the 2007-2008 *Graduate Catalog*, left column, top of page, under First Concentration: French or Spanish, 500 level, delete and replace with:

**500 level** – A minimum of 21 (Track I) or 27 (Track II) hours must be taken. These must include Modern Foreign Languages and Literatures 512, French 519, 584 for students with a first concentration in French, or Modern Foreign Languages and Literatures 512 and Spanish 550 for students with a concentration in Spanish. Thesis hours are excluded. If Modern Foreign Languages and Literatures 512 is used as part of a second concentration in applied linguistics, another course must be substituted in the first concentration.

Page 76 of the 2007-2008 *Graduate Catalog*, left column, middle of page, delete second bullet “Second Concentration” and all text below it and replace with:

• **Second Concentration.** A minimum of 18 (German or Track I) or 12 (Track II) hours beyond the bachelor's degree, taken in the field of Latin American Studies, applied linguistics or in a second language, either French, German, Italian, Portuguese, Russian or Spanish. For Track I and German, 12 of these hours must be at the 500 level or above. For Track II, 3 of these hours must be at the 500 level or above.

**French students choosing applied linguistics** must take French 421 or 429; 425; Modern Foreign Languages and Literatures 512; and 9 (Track I) or 3 (Track II) hours of appropriate electives in English or French. The student's graduate advisor must approve the electives chosen.

**German students choosing applied linguistics** must take German 425, 435 or 510, Modern Foreign Languages and Literatures 512, 3 hours of German linguistics, such as 426, 436, 631, or 632, and 6 hours of linguistics electives in English or German. The student's graduate advisor must approve the electives chosen.

**Spanish students choosing applied linguistics** must take Spanish 421 or 429; 425; Modern Foreign Languages and Literatures 512; and 9 (Track I) or 3 (Track II) hours of appropriate electives in English or Spanish. The student's graduate advisor must approve the electives chosen.

#### **Second concentration in Latin American Studies**

The second concentration in Latin American Studies combines the current second concentration of Track II (12 hours) and the cognate area (6 hours). Students choosing Latin American Studies as their second concentration will take 6 graduate hours in an appropriate language area that is outside their primary concentration (either French, Portuguese, or Spanish), and in addition 12 graduate hours in Latin American Studies classes outside of the primary concentration. This combination reinforces a student's first concentration that requires 45 credit hours beyond the BA degree in the primary language and literature area. Although the principal target audience consists of doctoral students in Spanish, and especially those with a Latin American specialization, the second concentration in Latin American Studies is available to all Ph.D. students in Modern Foreign Languages and Literatures.

The 18-hour concentration in Latin American Studies consists of the following requirements:

- Two courses (6 credit hours) at the 400 or 500 level in French, Portuguese, or Spanish, but outside of the student's first concentration language. Both classes must be taken in the same language area and need to be conducted in the target language.
- History 475 (Studies in Latin American History) (3 credit hours);
- Three additional graduate courses in at least 2 disciplines outside of the student's primary concentration. (e.g., 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 and approval.

**Cognate Field.** Six hours in graduate courses numbered 400 and above in a field outside the department or language family of the first concentration but related to the student's principal area of research. Students choosing applied linguistics as a second concentration are strongly urged to take their cognate work in a second language, and students choosing Latin American Studies as a second concentration are required to take 6 graduate credit hours outside their primary concentration in either French, Portuguese or Spanish in lieu of the cognate area. Students who select applied linguistics, French, German, Italian, Portuguese, Russian, and Spanish as their area of second concentration may seek the approval of their graduate committee to substitute the 6 hours in the cognate field by 6 hours in either the first or second concentration.

Page 76 of the 2007-2008 *Graduate Catalog*, right column, top of page, delete 2<sup>nd</sup> paragraph and replace with:

A comprehensive examination must be passed before the student may be admitted to candidacy. The candidate is required to defend his/her dissertation in an oral examination. Central emphasis is put on the doctoral dissertation as a final test of the candidate's scholarly qualifications.

## DEPARTMENT OF POLITICAL SCIENCE

REVISE REQUIREMENTS – POLITICAL SCIENCE MAJOR - PHD

On page 82 of the 2007-2008 *Graduate Catalog*, 3<sup>rd</sup> bullet, revise to:

- Completion of Political Science 510, 511 and 513.

Formerly: Completion of Political Science 510, 511 and 512.

On page 82 of the 2007-2008 *Graduate Catalog*, 5<sup>th</sup> bullet, revise to:

- Completion of Political Science 520.

Formerly: Completion of at least one course or seminar in each of the five broad subfields available for graduate instruction in the department.

## DEPARTMENT OF PSYCHOLOGY

REVISE REQUIREMENTS – PSYCHOLOGY MAJOR - PHD

On page 84 of the 2007-2008 *Graduate Catalog*, right column, Experimental Psychology Concentration, delete requirements section and replace with the following:

### Requirements

Twelve hours of quantitative coursework, including:

- 6 hours of Psychology 521-522, Statistics 531-532, Statistics 537-538, or equivalent
- 3 hours of Research Methods 505 or equivalent
- 3 additional hours of statistics coursework (as enumerated in current experimental handbook)
- 6 hours of research practicum (509)
- Psychology 528 College Teaching Practicum
- Two semesters of Psychology 515

Nine hours comprised of one course from each of the 3 core area offerings:

1. Biological
  - 527 Behavioral Neuroscience
  - 545 Advanced Animal Behavior
  - 546 Evolutionary Psychology
  - 547 Conceptual Foundations of Evolution and Behavior
2. Developmental
  - 512 Lifespan Development
  - 524 Brain and Behavioral Development
3. Social
  - 550 Social Psychology
  - 530 Psychology of Attitudes

Six additional hours from any of the core course offerings, but that may also include:

- 565 History and Systems (or 420 for graduate credit)
- 543 Cognitive Science

## DEPARTMENT OF THEATRE

REVISE REQUIREMENTS – THEATRE MAJOR, ACTING CONCENTRATION - MFA

On page 86 of the 2007-2008 *Graduate Catalog*, right column, revise to:

At least 12 hours each of 520, 523, and 525. Coursework in this concentration is conducted in a conservatory environment.

Formerly: At least 12 hours each of 520, 523, and 525. Course work in this concentration is conducted in a conservatory environment. In the third year, students are expected to intern with either the resident professional Clarence Brown Theatre Company or another regional professional theatre.

REVISE REQUIREMENTS – THEATRE MAJOR, DRAMATURGY CONCENTRATION - MFA

On page 86 of the 2007-2008 *Graduate Catalog*, right column, revise first sentence to:

Required courses include: Theatre 430, 510, (9 hours), 585 (12 hours), 6 hours in theory and literary criticism, plus electives from music, film, art, and business.

Formerly: Required courses include Theatre 430, 510 (9 hours), 512, 585 (12 hours), 6 hours in theory and literary criticism, plus electives from music, film, art, and business.

**COLLEGE OF BUSINESS ADMINISTRATION****All Changes Effective Fall 2008****I. COURSE CHANGES****(205) Business Administration**

ADD

**596 Global Business Strategies (3)** The strategic challenges of globalization; globalization strategies of multi-national corporations; the circumstances in which venturing overseas makes sense, and when it may not be a wise strategy; essential strategic and organizational challenges encountered by international managers (e.g., building competitive advantage in international markets, balancing benefits of global integration against the need to respond to local differences, managing joint ventures and strategic alliances including the growing trend of offshore outsourcing). Also examines how international differences in social and legal conditions affect strategic choices.  
(DE) Prerequisite(s): 513.

REVISE TO DROP PREREQUISITE, ADD COREQUISITE, AND ADD COMMENT

**520 Innovation and Entrepreneurship (3)**

(DE) Corequisite(s): 513.

Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.

REVISE DESCRIPTION AND CREDIT HOURS

**591 International Travel (2)** MBA students' international trip experience. Will familiarize students with the complexities of doing business internationally through experiential learning.

**DEPARTMENT OF ACCOUNTING AND INFORMATION MANAGEMENT****(558) Information Management**

REVISE PREREQUISITE AND ADD COMMENT

**543 Systems Audit Security and Controls (3)**

(DE) Prerequisite(s): 549.

Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.

REVISE TITLE AND DESCRIPTION, DELETE (DE) PREREQUISITE, ADD REGISTRATION PERMISSION

**549 Enterprise Applications, Security and Controls (3)** Examines the use and audit of enterprise information systems used to achieve strategic and operational advantage, support managerial decision making, and achieve operational control. Application database design, data security and control issues are also examined.

Registration Permission: Consent of instructor.

**DEPARTMENT OF FINANCE****(349) Finance**

ADD

**571 International Finance (3)** Issues in international finance, focusing on international financial markets, as well as multinational companies and how they operate in multiple levels of business activities within multiple countries.

(DE) Prerequisite(s): Business Administration 513.

Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.

REVISE TO DROP PREREQUISITE, ADD COREQUISITE, AND ADD COMMENT

**511 Strategic Management for Creation of Financial Value (3)**

(DE) Corequisite(s): Business Administration 513.

Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.

**DEPARTMENT OF MANAGEMENT****(529) Human Resource Development**

DROP

**509 Implementation of Human Resource Development Systems (3)****510 Foundations of Human Resources (3)****511 Issues and Trends in Human Resource Development (3)****514 Individual Study in Human Resource Development (3)****517 Career Development (3)****518 Performance Improvement Systems and Technologies (3)****519 Human Resource Problems (3)****520 Collaborative Strategies in Human Resource Development (3)****556 Organizational Development Strategies (3)****557 Design Strategies (3)****559 Evaluation Strategies (3)****561 Strategic Human Resource Development (3)****563 Organizational Communication Strategies (3)**

REVISE TITLE, DESCRIPTION, REGISTRATION PERMISSION, AND ADD CROSS-LISTING (PRIMARY)

**602 Designing Effective Organizations (3)** Survey of major topics and perspectives in organization theory and design including consideration of organizations as complex systems. Organizational environments, structure, culture, decision-making, organizational learning and change. *(Same as Management 621.)*

*Registration Permission: Consent of instructor.*

**603 Seminar in Macro Organizational Behavior (3)** Study of current theory and research in organizational behavior focused at the macro level. Attention to behavioral choice and decision making in organizations. *(Same as Management 622.)*

*Registration Permission: Consent of instructor.*

**(530) Human Resource Management**

ADD

**503 Problems in Lieu of Thesis (1-3)** Company project. Preliminary investigation of significant strategic human resource management-related issue (new initiative or significant organizational change to enhance organizational effectiveness) in a sponsoring organization. Work within company under guidance of faculty to develop proposal that defines issue and scope of project. Proposal to be approved by company and faculty.

*Repeatability: May be repeated. Maximum 3 hours.*

*(DE) Prerequisite(s): Management 521.*

*Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*

**530 Employment Law and Labor Relations (3)** Examination of the current legal environment of human resource management as it applies to effective workplace relations between the employer and employees, employment discrimination, labor relations, employee rights, and collective bargaining processes.

*(DE) Prerequisite(s): Management 521.*

*Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*

**535 Applied Training and Development (3)** Examination of the strategies and techniques of training systems, including needs assessment, motivation to learn, transfer of training, evaluation, and performance improvement as such systems satisfy both organization needs and personal career goals.

*(DE) Prerequisite(s): Management 521.*

*Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*

**540 Staffing (3)** Examination of the processes and practices that facilitate effective human resource management planning, recruitment, and placement of employees in relation to the organization's present and future needs.

*(DE) Prerequisite(s): Management 521.*

*Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*



**545 Compensation and Benefits (3)** Examination of the development and implementation of reward systems in order to achieve strategic organizational objectives. Reward systems include compensation, benefits, legal compliance, and cost containment policies as they apply in both the U.S. and international business environments.

*(DE) Prerequisite(s): Management 521.*

*Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*

**555 Strategic Human Resource Management (3)** Examination of the role of human resource management in creating and sustaining competitive advantage. Contemporary issues such as globalization, outsourcing, workforce diversity, mergers and acquisitions, downsizing, and occupational health, safety, and security are explored in terms of their strategic value.

*(DE) Prerequisite(s): Management 521.*

*Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*

**592 Internship (3)** The organizational experience provides additional human resource knowledge and assists the student in research and career advancement.

## **(625) Management**

ADD

**545 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.

**623 Overview of Strategic Management (3)** Survey of research and theory focusing on the interrelationship among strategy, structure, and performance at the organizational and industry levels. Business strategy, corporate strategy, governance, performance, environmental and industry forces, resource-based views of the firm.

*Registration Permission: Consent of instructor.*

**624 Managing the Strategy Process (3)** Managers at the apex of an organization; the roles and processes undertaken to form strategic direction. Who is involved, their strategic actions, processes, decision making over time, and performance/strategic outcomes.

*Registration Permission: Consent of instructor.*

**625 Contemporary and Global Issues in Strategic Management (3)** Political, economic, legal, and technological sectors of the global environment. Social responsibility and ethics, the role of culture, cross-cultural communications, negotiations, and decision-making.

*Registration Permission: Consent of instructor.*

ADD AND REQUEST APPROVAL FOR VARIABLE TITLE

**626 Special Topics (1-3)** Recent developments in management.

*Repeatability: May be repeated: Maximum 6 hours.*

*Registration Permission: Consent of instructor.*

ADD SECONDARY CROSS-LISTED COURSES

**621 Designing Effective Organizations (3)** *(See Human Resource Development 602.)*

**622 Seminar in Macro Organizational Behavior (3)** *(See Human Resource Development 603.)*

REVISE TITLE AND DESCRIPTION

**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.

REVISE TO ADD REPEATABILITY

**595 Selected Topics in Current Management Issues (3)**

*Repeatability: May be repeated: Maximum 6 hours.*

**DEPARTMENT OF MARKETING AND LOGISTICS****(626) Logistics**

ADD

**520 Integrated Logistics Management (3)** Focus on logistics as a value-adding process that achieves time and place synchronization of demand with operational fulfillment. Emphasis placed on challenges related to providing logistical support for procurement, manufacturing and marketing-distribution.

*(DE) Corequisite(s): Business Administration 513.*

*Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*

DROP SECONDARY CROSS-LISTED COURSE

**510 Statistics and Operations Management (3)** *(See Operations and Management Science 540.)*

**(632) Marketing**

ADD

**536 MBA Global Marketing Communications (3)** Strategies and tactics associated with communicating value to customers in an integrated and globally-aware manner. Professional selling, sales force management, advertising, public relations, and promotions management. Global aspects address the opportunities and challenges of managing integrated marketing communications globally. Where the MBA hub course is designed to be more strategic in nature, this course is more tactical and analytical, drawing upon a solid understanding of marketing strategy and demand/supply integration.

*(DE) Prerequisite(s): 520 and Business Administration 513.*

**537 MBA Global Product and Brand Management (3)** Complex, interdisciplinary nature of product development and product management in a global context. Strategic issues during product life cycle, from idea conception to product development to commercialization to eventual product dismissal. Cross-national forces that enable firms to design and maintain competitive marketing and supply chain networks across multiple geographic locations. Builds on a solid understanding of marketing strategy and demand/supply integration.

*(DE) Prerequisite(s): 520 and Business Administration 513.*

DROP

**530 MBA Marketing Concentration (6)**

DROP (DE) PREREQUISITE, ADD (DE) COREQUISITE, AND COMMENT

**520 Marketing and Customer Value (3)**

*(DE) Corequisite(s): Business Administration 513.*

*Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*

**DEPARTMENT OF STATISTICS, OPERATIONS, AND MANAGEMENT SCIENCE****(738) Operations and Management Science**

REVISE DESCRIPTION, DROP PREREQUISITE AND CROSS-LISTING, ADD (DE) COREQUISITE AND COMMENT

**540 Statistics and Operations Management (3)** Analysis of methods and models for understanding supply chain flows and processes. Introduction to management strategies and techniques applicable to design of systems in operations processes.

*(DE) Corequisite(s): Business Administration 513.*

*Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*

## **II: PROGRAM CHANGES**

### REVISE MBA PROGRAMS, FULL-TIME MBA

On page 88 of the 2007-2008 *Graduate Catalog*, revise the first sentence of the second paragraph:

The MBA program consists of a common core (29 hours), a global requirement (5 hours) and a selection of concentration and elective courses (15 hours) International students are not required to participate in the 2-credit hour international trip course.

### ADD A NEW PARAGRAPH AFTER THE THIRD PARAGRAPH UNDER FULL-TIME MBA:

The global component of the MBA program consists of 5 credit hours. In the spring semester of the first year, all MBA students are required to participate in a 2-credit hour international trip – BA 591. International students will not be required to participate in this experience since their activities in the MBA Program can satisfy this requirement. Unless international students choose to participate in the BA 591, they will have to take an additional 3 credit hour business elective in the fall of the second year to satisfy the program's overall credit requirements of 49 hours. The international experience will consist of a trip of up to 10 days to areas, such as Latin America, Asia or Europe. It will be over spring break or after the end of the spring semester. Given the size of the MBA Program, more than one trip may be offered in any given year. The academic purpose of the trip will be to familiarize students with the complexities of doing business internationally through experiential learning. Each of the trips will have a stated business purpose and will require the MBA students to use what they have learned in class and what they are exposed to on the trip to complete the deliverables for the course. During the trip, MBA students will be exposed to academics, government representatives, and both local and foreign firms doing business in the countries visited.

During the fall semester of the MBA students second year, they will complete a 3-credit hour Global Business Strategy course. Although global business strategies will have been discussed throughout the program during the first year, this course will apply integrated value chain strategies in the global context.

### Full Time MBA

<b>August - First year</b>	<b>Hours Credit</b>
BA 511 Core I	3
<b>Fall – First year</b>	
BA 511 Career Services	1
BA 512 Core II	15
<b>Spring – First Year</b>	
BA 513 Core III	9
MBA Concentration Hubs	6
BA 591 International Trip	2
<b>Fall – Second year</b>	
BA 596 Global Business Strategies	3
Business Elective	3
Concentration Classes	6
BA 514 Marketplace	1
<b>Total</b>	<b>49</b>

### REVISE DUAL MS-MBA PROGRAM – ENGINEERING

On page 91 of the 2007-2008 *Graduate Catalog*, make 3 revisions under the “Dual MS-MBA Program – Engineering and Computer Science” heading as indicated below.

In the first paragraph, add civil engineering, environmental engineering, and computer science to the list of engineering majors.

Delete the last sentence of paragraph two starting with “Since the development...”

Under the Requirements heading, replace the first 3 paragraphs and the showcase with the following. All the text below the showcase remains unchanged.

### Requirements

All College of Engineering students enrolled in the dual program must complete coursework designed to provide them with an integrated, multidisciplinary teamwork experience. The MS - MBA curriculum consists of 37 hours of coursework in the College of Business Administration and 24 hours of coursework in the College of Engineering in their engineering or computer science majors. A final examination as required by their respective Engineering Program Committee is to be taken during the final session of the summer following the second year.

During the second year dual degree candidates will take courses in their engineering major. The coursework for each option is designed to provide students with a concentration in their major and advanced skills to accomplish their teamwork assignments.

**Dual MS-MBA**

<b>August -- First Year</b>	<b>Hours Credit</b>
Business Administration 511 (MBA Core I)	3
<b>Fall -- First Year</b>	
Business Administration 501 (MBA Career Development)	1
Business Administration 512 (MBA Core II)	15
<b>Spring -- First Year</b>	
Business Administration 513 (MBA Core III)	9
BA 520 Innovation & Entrepreneurship Hub	3
Engineering or Computer Science Major*	3
<b>Summer</b>	
Engineering Major/Math	6
<b>Fall -- Second Year</b>	
Engineering or Computer Science Major	6
MBA Innovation & Entrepreneurship Electives	6
<b>Spring -- Second Year</b>	
Engineering or Computer Science Major	9
<b>Total</b>	<b>61</b>

\* See showcase in the College of Engineering for course disciplines for engineering and computer science major classes.

**REVISE DUAL MS-MBA PROGRAMS – SPORT MANAGEMENT**

On page 92 of the 2007-2008 *Graduate Catalog*, left column under the Requirements Heading, first sentence, change 31 hours to 33 and revise the Dual MS-MBA showcase:

**Dual MS-MBA**

<b>August -- First Year</b>	<b>Hours Credit</b>
Business Administration 511 (MBA Core I)	3
<b>Fall -- First Year</b>	
Business Administration 501 (MBA Career Development)	1
Business Administration 512 (MBA Core II)	15
<b>Spring -- First Year</b>	
Business Administration 513 (MBA Core III)	9
MBA Elective Recommend: Marketing 520	3
Sport Management 554	3
International BA 591	2
<b>Summer -- First Year</b>	
Sport Management 511	3
Sport Management 535	3
<b>Fall - Second Year</b>	
Sport Management 532	3
Sport Studies 542	3
Sport Management Elective	3
Sport Management, Sport Studies, or Recreation & Leisure Studies Elective	3
<b>Spring - Second Year</b>	
Sport Management 595	6
Sport Management 501	3
<b>Total</b>	<b>63</b>

**DEPARTMENT OF MANAGEMENT**

- DROP HUMAN RESOURCE DEVELOPMENT MAJOR - MS
- ADD HUMAN RESOURCE MANAGEMENT MAJOR - MS

On page 97 of the 2007-2008 *Graduate Catalog*, left column, replace the current Human Resource Development Major - MS heading, admission, and requirements with the following.

**Master of Science****Human Resource Management**

**Admission**

Students may begin graduate coursework for the Master of Science with a major in human resource management only in the fall semester. The application deadline is May 1 (February 1 for international students). 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 coursework in Business Foundations. The Foundations coursework includes Accounting 200; Economics 201; Business Administration 201; and Finance 301, or their equivalents as approved by the Director of the HRM program. All Business Foundations coursework 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.

	<b>Hours Credit</b>
Management 521	3
Human Resource Management 535	3
Human Resource Management 540	3
Human Resource Management 530	3
Human Resource Management 545	3
Human Resource Management 555	3
Management 595	3
Management 545	3
Economics 441	3
Statistics 531	3
Human Resource Management 503 or 592	3
<b>Total</b>	<b>33</b>

● **ADD ORGANIZATIONS AND STRATEGY CONCENTRATION – BUSINESS ADMINISTRATION MAJOR - PHD**

On page 98 of the 2007-2008 *Graduate Catalog*, left column, top of page, add heading and requirements for the new concentration.

**DOCTOR OF PHILOSOPHY  
BUSINESS ADMINISTRATION MAJOR  
ORGANIZATIONS AND STRATEGY CONCENTRATION**

Minimum course requirements are Management 621, 622, 623, 624 and 625.

This concentration provides a research-oriented terminal qualification for those seeking entry-level faculty positions in organizations and strategy. Students pursuing this program will take a minimum of 45 hours of coursework (beyond that required for an MBA) that covers concepts and issues in organizations and strategy, a support field of study, and research methods. Upon completion of the coursework and comprehensive exams, each candidate conducts dissertation research on a unique topic that adds to the knowledge base of the discipline. Successful completion and defense of the dissertation qualifies the candidate to pursue academic opportunities at research-oriented universities.

**DEPARTMENT OF MARKETING AND LOGISTICS****REVISE REQUIREMENTS FOR LOGISTICS CONCENTRATION - MBA**

On page 98 of the 2007-2008 *Graduate Catalog*, left column, replace Logistics 510 with 520.

**REVISE REQUIREMENTS FOR MARKETING CONCENTRATION – MBA**

On page 98 of the 2007-2008 *Graduate Catalog*, left column, replace Marketing 530 with 536 and 537.

## COLLEGE OF COMMUNICATION AND INFORMATION

All changes effective Fall 2008

### **I. COURSE CHANGES**

#### **(248) Communication and Information**

REVISE TO ADD COMMENT

##### **600 Doctoral Research and Dissertation (3-15)**

*Comment(s): Admission to a degree program in Communication and Information required.*

#### **SCHOOL OF ADVERTISING AND PUBLIC RELATIONS**

##### **(012) Advertising**

REVISE TO ADD COMMENT

##### **500 Thesis (1-15)**

*Comment(s): Admission to a degree program in Communication and Information required.*

##### **590 Project (3)**

*Comment(s): Admission to a degree program in Communication and Information required.*

REVISE REGISTRATION PERMISSION

##### **597 Independent Study (3)**

*Registration Permission: Must be a graduate student. Advanced undergraduate students who wish to be considered must seek permission of instructor.*

##### **(841) Public Relations**

REVISE TO ADD COMMENT

##### **500 Thesis (1-15)**

*Comment(s): Admission to a degree program in Communication and Information required.*

##### **590 Project (3)**

*Comment(s): Admission to a degree program in Communication and Information required.*

REVISE REGISTRATION PERMISSION

##### **597 Independent Study (3)**

*Registration Permission: Must be a graduate student. Advanced undergraduate students who wish to be considered must seek permission of instructor.*

#### **SCHOOL OF COMMUNICATION STUDIES**

##### **(250) Communication Studies**

REVISE TO ADD COMMENT

##### **500 Thesis (1-15)**

*Comment(s): Admission to a degree program in Communication and Information required.*

##### **590 Project (3)**

*Comment(s): Admission to a degree program in Communication and Information required.*

REVISE TO ADD REGISTRATION PERMISSION

##### **593 Independent Study (1-6)**

*Registration Permission: Must be a graduate student. Advanced undergraduate students who wish to be considered must seek permission of instructor.*

**SCHOOL OF INFORMATION SCIENCES****(560) Information Sciences**

REVISE REPEATABILITY AND REGISTRATION PERMISSION

**590 Problems in Information Sciences (3-6)**

*Repeatability: May be repeated. Maximum 18 hours.*

*Registration Permission: Consent of academic advisor.*

**SCHOOL OF JOURNALISM AND ELECTRONIC MEDIA****(592) Journalism and Electronic Media**

REVISE TO ADD COMMENT

**500 Thesis (1-15)**

*Comment(s): Admission to a degree program in Communication and Information required.*

**590 Project (3)**

*Comment(s): Admission to a degree program in Communication and Information required.*

REVISE REGISTRATION PERMISSION

**597 Independent Study (3)**

*Registration Permission: Must be a graduate student. Advanced undergraduate students who wish to be considered must seek permission of instructor.*

**II. PROGRAM CHANGES****(248) Communication and Information**

REVISE REQUIREMENTS FOR COMMUNICATION AND INFORMATION MAJOR - MS

Page 104, column 2, paragraph 2 of the 2007-2008 *Graduate Catalog* under "Other Requirements" revise last sentence to

The final comprehensive exam will include a written project and an oral defense of it.

REVISE REQUIREMENTS FOR COMMUNICATION AND INFORMATION MAJOR - PHD

On page 105, under "Other Requirements" add as 1<sup>st</sup> paragraph:

Students must successfully complete Communication and Information 610 and 615 and a statistics class before the beginning of the second year of study.

**COLLEGE OF EDUCATION, HEALTH, AND HUMAN SCIENCES****All changes effective Fall 2008****I. COURSE CHANGES****DEPARTMENT OF CHILD AND FAMILY STUDIES****(245) Child and Family Studies**

REVISE TITLE, DESCRIPTION AND DROP (DE) PREREQUISITE(S)

**566 Theories of Family Therapy (3)** Exploration of classic and contemporary theoretical approaches in family therapy. Emphasis given to application of concepts and methods from these approaches to family situations. (*Same as Counselor Education 566.*)

REVISE TITLE AND DESCRIPTION, DROP (DE) PREREQUISITE(S), ADD COMMENT(S)

**650 Advanced Qualitative Research in Human Sciences (3)** Methods of qualitative research are explored including narrative, phenomenological, ethnographic, grounded theory, and case study approaches. Emphasis on utilizing and analyzing data from in-depth interviews. Development of a proposed study and pilot data collection and analyses are required.

*Comment(s): For master's students completing the certificate in qualitative analysis and for doctoral students with consent of instructor.*

**DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELING****(255) Counselor Education**

REVISE TITLE OF SECONDARY CROSS-LISTED COURSE

**566 Theories of Family Therapy (3)** (*See Child and Family Studies 566.*)

REVISE TITLE

**480 Skills for Counseling (3)**

**(310) Educational Psychology**

REVISE TITLE AND DESCRIPTION

**524 Learning in the Workplace (3)** Theories and concepts supporting design and management of learning activities for adults in the workplace.

**527 Ethical Issues in Adult Education (3)** Ethical issues confronting the field of adult education; development of critical analysis skills by examining ethical decision making processes.

**550 Applied Statistical Concepts (3)** Consumer-oriented, conceptual treatment of statistics and quantitative basis of testing.

REVISE TITLE AND DESCRIPTION OF PRIMARY CROSS-LISTED COURSE

**577 Statistics in Applied Fields I (3)** Applications of descriptive and inferential statistics to problems in applied fields. Use of internet sites and computer programs to analyze data. (*Same as Educational Administration 577.*)

REVISE TITLE, DESCRIPTION AND DELETE REGISTRATION PERMISSION

**677 Statistics in Applied Fields II (3)** Applications of parametric and nonparametric statistical inference to problems in applied fields. Use of computer programs and internet sites in analyzing data.



**DEPARTMENT OF EXERCISE, SPORT, AND LEISURE STUDIES****(347) Exercise Science**

ADD SECONDARY CROSSLISTED COURSE

**623 Advanced Topics in Obesity (1-4)** *(Same as Animal Science 623.)***(957) SPORT MANAGEMENT**

REVISE CREDIT HOURS AND ADD REPEATABILITY

**595 Internship (1-6)** Full-time application of previous theoretical and applied knowledge and skills in appropriate sport setting.*Repeatability: May be repeated. Maximum 6 hours.***(959) SPORT STUDIES**

REVISE DESCRIPTION

**535 Health and Exercise Psychology (3)** Critical examination of various aspects of health and exercise psychology including the psychological benefits of exercise (e.g., increased well-being) as well as the psychological pitfalls of too much exercise (e.g., exercise addiction, overeating, disordered eating behavior etc.).**538 Professional Practice Issues in Sport Studies (3)** Critical examination of various aspects of professional practice in sport studies with particular emphasis on ethical issues. Also contains a professional development component related to interviewing, resume building, etc.**DEPARTMENT OF NUTRITION****(726) Nutrition**

REVISE CREDIT HOURS

**541 Research Methods (3)****DEPARTMENT OF THEORY AND PRACTICE IN TEACHER EDUCATION****(293) Educational Administration**

ADD

**618 Advanced Qualitative Research in Educational Leadership (3)** This qualitative methods seminar explores critical issues in qualitative research at an advanced level. Students explore more fully the areas of interviewing, thematic analysis, the use of theory and theoretical frameworks in qualitative research, and issues of methodological defensibility and analytical rigor (validity and reliability) in qualitative research.*(DE) Prerequisite(s): Cultural Studies in Education 560 or Educational Administration 615.*

REVISE TITLE OF SECONDARY CROSS-LISTED COURSE

**577 Statistics in Applied Fields (3)** *(See Educational Psychology 577.)***(394) Foreign Language/ESL Education**

DROP

**566 ESL Assessment and Evaluation (3)****578 Teaching English as a Second Language (3)**

ADD NEW COURSE FOR GRADUATE CREDIT

**466 Assessment and Evaluation (3)** Highlights the implementation of authentic assessment, specifically, portfolio assessment for ESL students in K-12 settings. Focuses on designing appropriate tools for various assessment purposes. Specific types and different forms of assessment are examined based on their effectiveness and meaningfulness.

Required for Tennessee (Prek-12) licensure.

*Comment(s): Requires admission to teacher education or consent of instructor.*

**476 Teaching English as a Second Language (3)** Examines ESL pedagogy, practices, research, and instructional strategies that accommodate students at all levels of ESL/EFL settings. Required for Tennessee (PreK-12) licensure. *Comment(s): Requires admission to teacher education or consent of instructor.*

Current Course (394) FOREIGN LANGUAGE/ESL EDUCATION	Equivalent Courses Fall 2008 (394) FOREIGN LANGUAGE/ESL EDUCATION
Foreign Language/ESL Education 566	Foreign Language/ESL Education 466
Foreign Language/ESL Education 578	Foreign Language/ESL Education 476

## (932) Special Education

DROP

### 558 Neuromuscular and Health Disorders: Educational Implications (3)

Current Course (932) SPECIAL EDUCATION	Equivalent Courses Fall 2008 (932) SPECIAL EDUCATION
Special Education 558	Special Education 459

## ADD NEW COURSES FOR GRADUATE CREDIT

**459 Neuromuscular and Health Disorders: Educational Implications (3)** Neurological impairments, physical disabilities and special health conditions, autism. Investigation of instructional techniques and adaptations.

**430 Practicum in Applied Behavior Analysis (3)** Emphasizes the application of applied behavior analysis principles including the study of designing, implementing, and evaluating behavior analytic interventions relevant to alleviating significant problem behaviors in the classroom setting. Learners examine topics in the use of applied behavior analysis such as direct instruction, behavior reduction, functional analysis, positive behavioral supports, and ethical issues in the use of various procedures

*Registration Restriction(s): Qualification – admission to teacher education.*

## REVISE TITLE AND DESCRIPTION

**555 Methods of Teaching Students with Autism Spectrum Disorders (3)** Provides an in-depth description of students with autism spectrum disorders (ASD), including differentiating characteristics among the various subtypes of pervasive developmental disorder. Appropriate assessment practices, programming considerations, and effective instructional methods are addressed.

**556 Methods of Teaching Students with Emotional and Behavioral Disorders (3)** Examines educational strategies and techniques for individual and class wide behavior management as well as curriculum and teaching strategies for promoting the social and emotional development of students with behavior and learning exceptionalities. Both reactive and proactive strategies for working with students are addressed.

*Comment(s): Admission to graduate program or consent of instructor.*

## II. PROGRAM CHANGES

### DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELING

#### ● ADD CERTIFICATE - EVALUATION

On page 115 of the 2007/2008 *Graduate Catalog* add the Certificate in Evaluation as follows:

The 12-hour graduate certificate in evaluation is comprised of courses that will expose students to both theories/methods used in evaluation research and applied experience conducting an evaluation. The graduate certificate in evaluation is administered by faculty members within the Department of Educational Psychology and Counseling.

#### Requirements

- Educational Psychology 533\*.
- Educational Psychology 651.

- At least one of the following: Educational Psychology 652, or 670.
- At least one of the following: Educational Psychology 581\*, 583\*, 653\*, or 654\*.
- Individuals must have a master's degree or higher.
- Individuals must complete 12 credits of the courses listed above in order to earn a certificate.
- All courses must be completed within the past five years of the application for a certificate.

Courses marked with an asterisk (\*) may be replaced with a comparable course with permission of the certificate committee (i.e., Evaluation and Assessment faculty).

Refer to the *Graduate Catalog* for a description of the courses.

Contact Dr. Gary Skolits ([gskolits@utk.edu](mailto:gskolits@utk.edu)) for more information and a copy of the certificate application.

#### ● ADD CERTIFICATE - QUALITATIVE RESEARCH METHODS IN EDUCATION

On page 115 of the 2007/2008 *Graduate Catalog*, add the Certificate in Qualitative Research Methods in Education as follows:

The 12-hour graduate certificate in qualitative research methods in education is an intercollegiate, interdepartmental program of study that is administered by faculty within the Department of Educational Psychology and Counseling. The certificate is intended for currently admitted graduate students wishing to develop their skills in conducting qualitative research studies. Certificate candidates must currently be admitted to a graduate program at the university or hold a terminal research degree.

##### **Requirements**

- Cultural Studies in Education 560.
- At least one of the following: Cultural Studies 661, Child and Family Studies 650, Educational Administration 618.
- At least two of the following: Educational Psychology 531, Educational Administration 617, Cultural Studies in Education 660, Cultural Studies in Education 625, Cultural Studies in Education 526.

Other courses may, where appropriate, be substituted for the courses listed above with the permission of the program coordinator.

#### ● ADD CERTIFICATE - QUANTITATIVE RESEARCH METHODS IN EDUCATION

On page 115 of the 2007/2008 *Graduate Catalog*, add the Certificate in Quantitative Research Methods in Education as follows:

The 15-hour graduate certificate in quantitative research methods in education is administered within the Department of Educational Psychology and Counseling. The certificate is intended for currently admitted graduate students wishing to develop their quantitative research knowledge and skills base. Certificate students must be admitted to a graduate program at the university or hold a graduate degree.

##### **Requirements**

- Educational Psychology 577/Educational Administration 577 (3) or Educational Administration 614/Higher Education Administration 614 (3).
- Educational Psychology 677 (3).
- Educational Administration 616/Higher Education Administration 616 (3) or Psychology 522 (3).
- Two of the following Educational Psychology 505 (3), 550 (3), 583 (3), 663 (3).

Other courses may, where appropriate, be substituted for the courses listed above with the permission of the program coordinator.

#### REVISE EDUCATIONAL PSYCHOLOGY AND RESEARCH MAJOR – PHD – EDUCATIONAL PSYCHOLOGY AND RESEARCH CONCENTRATION (PENDING THEC APPROVAL)

On page 113, of the 2007/2008 *Graduate Catalog*, right column, replace the current heading and text with the following:

##### **Major Core (13 hours)**

The major core in educational psychology reflects the connections between concentrations and their foundation in educational psychology. The core also includes a departmental doctoral seminar that orients new students to doctoral study and scholarly activities. In addition, all students must take as one of their research courses a departmental course that introduces modes of inquiry through appropriate selection of quantitative and/or qualitative methods. Students may select other research courses according to preference and concentration requirements as described below. Core courses include Educational Psychology 507, 513, 525, 533, 601.

REVISE EDUCATIONAL PSYCHOLOGY AND RESEARCH MAJOR – PHD - EVALUATION AND ASSESSMENT  
CONCENTRATION (PENDING THEC APPROVAL)

On page 115 of the 2007/2008 *Graduate Catalog*, left column, under Evaluation and Assessment concentration, replace current showcase with the following:

	Hours Credit
<sup>1</sup> Major Core .....	13
<sup>2</sup> Concentration .....	18
<sup>3</sup> Research .....	15
<sup>4</sup> Electives .....	6-12
<sup>5</sup> Cognate .....	6
<sup>6</sup> Dissertation .....	24
<b>Total</b>	<b>82-88</b>

<sup>1</sup> The major core consists of the following courses: Educational Psychology 507, 513, 525, 533, and 601. In addition, all students take Educational Psychology 506 as part of the research requirement.

<sup>2</sup> This concentration consists of the following Educational Psychology courses: Educational Psychology 581, 651, 652, 653, 654, and 670.

<sup>3</sup> A departmental course introducing quantitative and qualitative methods is required for all students as a part of the minimum 15 hours of research. In addition to a mix of both qualitative and/or quantitative methodologies, at least six hours of statistics are strongly encouraged.

<sup>4</sup> Students are to explore other fields related to their areas of interest. The courses may include curriculum, instructional technology, educational administration/higher education or others courses within and beyond education.

<sup>5</sup> At least 6 hours must be taken in a cognate area outside the program.

<sup>6</sup> All students will enroll in a minimum of 24 hours of dissertation. Further details are described elsewhere in the catalog.

REVISE EDUCATIONAL PSYCHOLOGY AND RESEARCH MAJOR – PHD – ADULT EDUCATION CONCENTRATION  
(PENDING THEC APPROVAL)

On page 114 of the 2007/2008 *Graduate Catalog*, left column, under Adult Education Concentration, replace current requirements text with the following:

**Requirements**

The PhD concentration in adult education involves a minimum of 79 hours of study beyond the master's degree. This includes at least 55 hours of coursework and 24 hours of dissertation.

	Hours Credit
<sup>1</sup> Major Core. ....	13
<sup>2</sup> Concentration .....	18
<sup>3</sup> Research .....	15
<sup>4</sup> Cognate .....	6
Electives .....	3-12
<sup>5</sup> Dissertation .....	24
<b>Total</b>	<b>79-88</b>

REVISE EDUCATIONAL PSYCHOLOGY AND RESEARCH MAJOR – PHD – COLLABORATIVE LEARNING  
CONCENTRATION (PENDING THEC APPROVAL)

On page 114, of the 2007/2008 *Graduate Catalog*, right column, under Collaborative Learning Concentration replace the current showcase with the following:

	Hours Credit
<sup>1</sup> Major Core in Educational Psychology and Research. ....	13
<sup>2</sup> Concentration Core in Collaborative Learning .....	24
<sup>3</sup> Research Methods .....	15
<sup>4</sup> Cognate .....	6
<sup>5</sup> Electives .....	12
<sup>6</sup> Dissertation Research .....	24
<b>Total</b>	<b>94</b>

REVISE EDUCATIONAL PSYCHOLOGY AND RESEARCH MAJOR – PHD – APPLIED EDUCATIONAL PSYCHOLOGY  
CONCENTRATION (PENDING THEC APPROVAL)

On page 114, of the 2007/2008 *Graduate Catalog*, left column, under Applied Educational Psychology Concentration replace the current showcase with the following:

	Hours Credit
<sup>1</sup> Major Core .....	13
<sup>2</sup> Applied Educational Psychology Doctoral Seminar .....	12

<sup>3</sup> Area of Emphasis .....	9
<sup>4</sup> Research .....	15
<sup>5</sup> Cognate .....	6
<sup>6</sup> Professional Preparation .....	9
<sup>7</sup> Dissertation .....	24
<b>Total</b>	<b>88</b>

## DEPARTMENT OF EXERCISE, SPORT, AND LEISURE STUDIES

### ADD SPORT MANAGEMENT SPECIALIZATION TO THE SPORT STUDIES CONCENTRATION – EXERCISE AND SPORT SCIENCES MAJOR - PHD

On Page 119 of the 2007-2008 *Graduate Catalog*, list the sport management specialization under the sport studies concentration as follows:

Sport studies concentration  
(specializations in motor behavior; sport management; sport sociology; sport psychology)

### ADD SPORT STUDIES CONCENTRATION HEADING AND TEXT TO THE EXERCISE AND SPORT SCIENCES MAJOR – PHD

### REVISE EXERCISE AND SPORT SCIENCES MAJOR – PHD – SPORT STUDIES CONCENTRATION

On Page 122 of the 2007-2008 *Graduate Catalog*, right column, bottom of page, revise the 1<sup>st</sup> and 5<sup>th</sup> sentences as follows:

The PhD with a major in exercise and sport sciences offers a concentration in sport studies with areas of specialization in motor behavior, sport management, sport sociology, and sport psychology.

Students must have completed all requirements for a master's degree in kinesiology, physical education, psychology, sociology, sport studies, sport management or a related field prior to beginning the doctoral program.

### REVISE EXERCISE SCIENCE MAJOR - BIOMECHANICS/SPORTS MEDICINE CONCENTRATION - MS

Page 119 of the 2007/2008 *Graduate Catalog*, replace the current text with the following:

#### BIOMECHANICS/SPORTS MEDICINE CONCENTRATION

##### Requirements

Exercise Science 508, 513, 531, 601 (1 hour seminar, 2 enrollments), 633, and one additional 3-credit graduate exercise science course; and either Exercise Science 501 (project) or 500 (thesis). Thesis students must also take a statistics course approved by advisor. Electives approved by advisor from exercise science, sports studies, biomedical engineering, and other approved programs. Thirty total hours are required for thesis students, and 32 hours for non-thesis students.

### REVISE EXERCISE SCIENCE MAJOR, EXERCISE PHYSIOLOGY CONCENTRATION - MS

Page 120 of the 2007/2008 *Graduate Catalog*, replace the current text with the following:

#### EXERCISE PHYSIOLOGY CONCENTRATION

##### Requirements

Exercise Science 508, 533, 565, 567, 601 (1 hour seminar, 2 enrollments), and 635. One additional 3-credit graduate exercise science course and either Exercise Science 501 (project) or 500 (thesis). Thesis students must also take a statistics course approved by advisor. Electives approved by advisor from exercise science, nursing, nutrition, sport studies or other approved discipline. Thirty total hours are required for thesis students, and 32 hours for non-thesis students.

### DELETE DUPLICATE PARAGRAPH'S REGARDING GRADUATE ASSISTANTSHIPS

On page 121 of the 2007/2008 *Graduate Catalog*, delete the paragraphs on Graduate Assistantships in the middle of the left column (second heading) and at the bottom of the right column.

### REVISE SHOWCASE - SPORT MANAGEMENT CONCENTRATION – MS/MBA DUAL DEGREE PROGRAM

On page 122 of 2007/2008 *Graduate Catalog*, right column, revise the 1<sup>st</sup> year spring semester and total credit hours of the Dual MS-MBA program as follows:

	Hours Credit
<b>First Year</b>	
<b>Spring</b>	
Business Administration 513 .....	9
MBA Elective – Recommend: Marketing 520 .....	3
Sport Management 554 .....	3
Business Administration 591 .....	2
<b>Total Hours</b>	<b>63</b>

● DROP THE FOLLOWING CONCENTRATION - SPORT STUDIES MAJOR – MS

Sport studies concentration

● ADD THE FOLLOWING CONCENTRATIONS - SPORT STUDIES MAJOR – MS

Sport psychology concentration  
Sport sociology concentration

ADD CONCENTRATION HEADINGS AND REQUIREMENTS – SPORT STUDIES MAJOR - MS

On page 122 of the 2007-2008 *Graduate Catalog*, right column, middle of page, delete current heading and requirements and replace with:

**Sport Psychology Concentration**

**Sport Sociology Concentration**

**Requirements**

The master's degree concentrations in sport psychology and sport sociology have a great deal of flexibility that allows students to take courses that best suit their individual professional goals and interests. Students are required to take 30 hours, with at least 20 of those hours comprised of 500 or 600 level courses. A minimum of 15 hours must be selected from the current sport studies courses. Additional courses may be selected from either sport studies or other departments. The non-thesis option, which consists of 30 hours and a written comprehensive exam, is designed for graduates seeking positions as practitioners (e.g., teachers, coaches, athletic trainers, etc.). The thesis option, which consists of 24 hours of coursework and a 6-hour thesis (Sport Studies 500), is recommended for students who intend to pursue a Ph.D. degree after graduating and is available only upon consultation with and approval by the student's advisor.

ADD SPORT STUDIES INTRODUCTION AND DESCRIPTION

On page 121 of the 2007-2008 *Graduate Catalog*, bottom of page, add the following text

**SPORT STUDIES**

The primary focus of the sport studies program is on the organizational, psychological and sociological factors that permeate all levels of organized sport. The program is committed to the principles of diversity and social justice, the critical examination of sport in contemporary society, and the provision of positive sport and movement experiences for all people. We strive for excellence in research, teaching, practice, and service and are dedicated to providing superior and innovative programs of study that will enable our students to become effective and imaginative professionals, scholars, and citizens. The program offers three Master of Science concentrations and four PhD specializations.

The motor behavior doctoral specialization involves the study of theories of motor control and learning, research regarding the factors that influence motor performance and learning, and the application of principles of motor control and skill learning to a variety of movement settings. Students acquire the knowledge and skills necessary to critically evaluate motor behavior research, conduct independent scholarly activity, and prepare for a career as a university faculty member.

The sport management master's concentration and doctoral specialization involves the study of sport organizations and the application of management theory and principles to a variety of sport endeavors. Students learn a combination of skills related to the planning, organizing, leading, and evaluating of any organization or department for which the primary product or service is sport related. Sport management has been a formally recognized degree program since 1983, providing students with the cutting-edge knowledge necessary for a successful career in the sport industry. The standard curriculum offers students a unique combination of coursework and practicum experience in both the public and private sector. Graduates obtain positions in collegiate and other amateur sport settings as well as in professional sport.

The master's sport psychology concentration and doctoral specialization involve the study of psychological theory, systematic research of both a quantitative and qualitative nature, and the application of psychological concepts to the performance and learning of sport skills in both competitive and recreational settings. Students acquire the knowledge and skills necessary to critically examine the literature in sport psychology and to provide psychological assistance for sport performers in a variety of forms (e.g., mental training, injury rehabilitation, skill refinement, stress management, etc.). The majority of graduates of the sport psychology master's concentration obtain positions in teaching, coaching, athletic training, and strength and conditioning when they finish their degrees. The remaining students apply for PhD programs after completing master's degree requirements and aspire to careers as faculty members at the university level. The

majority of PhD students obtain university faculty positions after completing their degrees. However, some obtain positions as full-time mental training consultants in university athletic departments or privately owned sport psychology businesses.

The master's sport sociology concentration and doctoral specialization are concerned with socio-cultural issues in sport and the way in which sport interacts with social aspects of life, with a focus on inclusion and diversity. This area also explores the social institutions of media, politics, religion, and education in relation to sport, as well as the historical development of sport. The majority of graduates of the sport sociology master's concentration continue their education at the doctoral level. However, some work in teaching/coaching positions in interscholastic and intercollegiate sports. The majority of PhD students pursue careers as faculty in higher education after completing their degrees. However, some have obtained positions outside of academia, for example in diversity services for major corporations.

#### ADD INTRODUCTION AND REQUIREMENTS - EXERCISE AND SPORT SCIENCES MAJOR - PHD

On page 122 of the 2007-2008 *Graduate Catalog*, right column, bottom of page, delete current text and replace with the following introduction and requirements.

#### DOCTOR OF PHILOSOPHY

##### Exercise and Sport Sciences Major

The PhD with a major in exercise and sport sciences offers a concentration in sport studies with areas of specialization in motor behavior, sport management, sport psychology, and sport sociology. The program stresses an interdisciplinary approach to coursework and research and expects students to become proficient in qualitative and quantitative research methods. Students are expected to obtain a significant grounding in the allied, parent disciplines. The program prepares students to obtain faculty positions in higher education and/or jobs with applied educational, business, and sport enterprises. Students must have completed all requirements for a master's degree in kinesiology, physical education, psychology, sociology, sport studies, business, or a related field prior to beginning the doctoral program. The program usually takes 3 years (2 years of coursework and 1 year for the dissertation).

#### Requirements

	Hours Credit
Concentration . . . . .	15
Research (3 hours of Sports Studies 601 included) . . . . .	15
Specialization . . . . .	9
Cognate . . . . .	6
Dissertation . . . . .	24

#### DEPARTMENT OF THEORY AND PRACTICE IN TEACHER EDUCATION

##### ● ADD THE FOLLOWING CONCENTRATION – TEACHER EDUCATION MAJOR (TRACK 2) – MS

English language learning

On page 134 of the 2007/2008 *Graduate Catalog*, left column, bottom of page, under the Requirements heading for Track 2 Common Course Requirements, add the heading and requirements for the new concentration.

#### English Language Learning

Theory and Practice in Teacher Education 517; advisor-approved electives (9).

**COLLEGE OF ENGINEERING**

All changes effective Fall 2008.

**I. COURSE CHANGES****DEPARTMENT OF CHEMICAL AND BIOMOLECULAR ENGINEERING  
(FORMERLY DEPARTMENT OF CHEMICAL ENGINEERING)****(226) Chemical Engineering**

DROP SECONDARY CROSS-LISTED COURSE

**594 Culminating Integrated Project Report (3)** (*See Mechanical Engineering 594.*)

REVISE TITLE AND DESCRIPTION

**425 Chemical and Biomolecular Process Economics (3)** Concepts and methods of cost estimating, debt and equity financing, discounted cash flow methods, and estimation of product manufacturing costs. Includes case studies and the use of computer methods for financial and sensitivity analysis.

**DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING****(254) Civil Engineering**

ADD

**554 Public Transit Planning and Operations (3)** Characteristics of transit modes—conventional, informal, and paratransit; operational design of transit services: route planning and scheduling; cost analysis; traveler behavior; performance evaluation; data collection methods; organization and financing.  
*Comments: Graduate standing or consent of instructor required.*

REVISE TITLE OF SECONDARY CROSS-LISTED COURSE

**416 Hydrology (3)** (*See Biosystems Engineering 416.*)

**(344) Environmental Engineering**

ADD

**511 Environmental Chemistry (3)** A fundamental and quantitative treatment of the chemical processes that govern the formation, fate, and treatment of pollutants in natural and engineered systems. Chemical thermodynamics of pollutants; atmospheric reaction pathways; phase equilibria; aqueous solution equilibria; reduction-oxidation chemistry.  
*(DE) Prerequisite(s): Chemistry 130.*

**512 Environmental Transport and Kinetics (3)** Engineering principals that govern the transport, fate, and treatment of pollutants in natural and engineered systems. Material balances; convection and dispersion; diffusion and mass transfer; interfacial phenomena; chemical kinetics; reactor design and modeling.  
*(DE) Prerequisite(s): Chemistry 130, Civil Engineering 390, Mathematics 231 and 241.*

**513 Environmental Microbiology (3)** Fundamental aspects of microbiology governing environmental and engineered applications emphasizing bioenergetics, enzyme and microbial kinetics, metabolic diversity, microbial ecology and biochemical cycling.  
*Comments: Graduate standing in science or engineering or consent of instructor required.*

**550 Advanced Applications in Water and Waste Treatment (3)** Theory and design applications of physiochemical and biological processes for the treatment of drinking water, municipal and industrial wastewaters, and contaminated groundwater.  
*(DE) Prerequisite(s): Civil Engineering 380.*  
*(DE) Corequisite(s): 512 and 513.*

**558 Solid and Hazardous Waste Management (3)** Magnitude and characteristics of solid and hazardous waste problems; collection systems; design of treatment and disposal systems; landfills, incineration, stabilization, composting, and remediation technologies; remedial investigations and feasibility studies; industrial solid and hazardous waste treatment; current and future regulations.  
*Comment(s): Graduate standing in science or engineering or consent of instructor required.*



**574 Air Pollution Engineering and Control (3)** Introduction to the fundamentals of air pollution, light scattering and visibility reduction, air quality laws and regulations, estimating concentrations from emission factors, theory and design of settling chambers, cyclone separators, wet collectors, fabric filters, electrostatic precipitator and control methods for gaseous air pollutants.

*Comment(s): Graduate standing in science or engineering or consent of instructor required.*

**650 Environmental Engineering Laboratory (3)** Experimental measurements of water quality and advanced laboratory investigation of water/waste treatment and environmental restoration processes. Emphasis is placed on research methods, experimental design, and application of laboratory data to field scale solutions.

*Contact Hour Distribution: 1-hour lecture and one 4-hour lab.*

*(DE) Prerequisite(s): 511, 512, 513.*

**671 Advanced Concepts of Air Pollution Engineering (3)** Multidisciplinary approach to the principles and chemistry of incineration, adsorption theory and design of adsorbers in transient state, absorption theory and column design, applications and chemistry of non-thermal plasma, computational design and optimization of air pollution control facilities.

*(DE) Prerequisite(s): 574.*

**672 Air Pollution Dispersion Modeling (3)** Diffusion of air pollution in the atmosphere; application of USEPA computer models for atmospheric dispersion from industrial, area, mobile sources, and spills; evaluation of meteorological data and comparison of model predictions to ambient measurements; new source review and permitting requirements.

*(DE) Prerequisite(s): 574.*

DROP

**551 Physicochemical Unit Processes (3)**

**552 Biological Treatment Theory (3) (Primary course)** *(Same as Biosystems Engineering 552.)*

**553 Aquatic Chemistry (3)**

**554 Environmental Engineering Chemistry (3)**

**555 Solid Waste Management (3)**

**556 Hazardous Waste Management (3)**

**570 Air Quality Management/Pollution Control (3)**

**571 Design of Air Pollution Control Systems (3)**

**572 Air Quality Dispersion Modeling (3)**

**573 Sampling of Air Pollutants (3)**

**651 Industrial Waste Unit Operations and Processes (3)**

## **DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE (FORMERLY DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING)**

MOVE ACADEMIC DISCIPLINE (266) COMPUTER SCIENCE AND ALL COURSES FROM DEPARTMENT OF COMPUTER SCIENCE IN COLLEGE OF ARTS AND SCIENCES TO DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE IN COLLEGE OF ENGINEERING

MOVE ACADEMIC DISCIPLINE (319) AND ALL COURSES FROM DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING TO THE DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

## MEMORANDUM

To: UT Faculty and Staff  
From: Robert Holub, Provost and Vice Chancellor for Academic Affairs  
Subject: Merger of Computer Science and Electrical and Computer Engineering  
Date: Nov. 17, 2006

It gives me great pleasure to announce the merger of the Department of Computer Science and the Department of Electrical and Computer Engineering. The new department, which will be named the Department of Electrical Engineering and Computer Science, will reside in the College of Engineering. It will provide new perspectives on computational science and open up novel and exciting possibilities for creative work.

The faculties of each of these departments have already agreed in principle to approve the merger, which will officially take place on July 1, 2007. Committees consisting of members from both former departments have been hard at work ironing out the details. The departments and the entire faculty owe a great debt of thanks to the merger committee that has worked so hard to organize this union and to keep it on track.

I am certain that the existence of Electrical Engineering and Computer Science signals a new day for computational sciences on the Knoxville campus. I look forward to working with Dean Way Kuo and with the new unit to make certain that the transition is accomplished smoothly.

**(266) Computer Science**

ADD

**501 Project in Lieu of Thesis (3)** Capstone course taken under supervision of student's major professor and master's committee. Individual project involving literature survey, development of some algorithms, software, testing, writing a white paper or journal paper, or other suitable project.

*Repeatability: May be repeated. Maximum 6 hours.*

*Registration Permission: Consent of graduate committee.*

**(319) Electrical and Computer Engineering**

ADD EXISTING COURSES FOR GRADUATE CREDIT

**433 Introduction to VLSI (3)** Investigates the behavior of microelectronic devices in digital circuits and helps the students develop an understanding of the relationship between the device physics and the device static and dynamic characteristics. Includes laboratory assignments which are designed to give advanced undergraduate students a working knowledge of CMOS digital integrated circuit technology, circuit design methodologies, including simulation and physical layout of CMOS digital circuit structures.

*(DE) Prerequisite(s): 335.*

**455 Embedded Systems Design (3)** Design and development of embedded systems for data acquisition and special-purpose computing systems, such as peripheral interfacing, serial/parallel communications and bus systems. Assembly language programming, software architecture, and machine architecture of microcontrollers. Includes Level 1 design projects which require laboratory work.

*(DE) Prerequisite(s): 355.*

ADD

**554 Computer Security and Forensics (3)** Application of the principles of computer forensic analysis to modern security problems. Covers industry and government standards and guidelines for the forensic examination and analysis of audit data, disk drives, and computer programs. Provides guidelines for establishing and maintaining a forensic laboratory capability.

*Registration Permission: Consent of instructor.*

**555 Embedded Systems (3)** Design principles, analysis methods and case studies of microprocessor-based and time-critical embedded systems, such as sensor and actuator networks, multimedia devices and avionics. Topics include real-time operating systems, single-processor scheduling, multi-processor scheduling, distributed systems, quality of service, resource management, end-to-end processor utilization control, embedded middleware, power-aware computing, energy management, and fault-tolerance.

*(DE) Prerequisite(s): 455.*

*Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*

**556 Wireless Sensor Networks (3)** Principles and design approaches of wireless sensor networks. Topics include operating systems and programming languages, physical network properties, Media Access Control protocols, geographical routing, data aggregation, real-time communication, query processing, power management, sensing coverage, and applications.

*(DE) Prerequisite(s): 455.*

*Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.*

**575 High Performance Computer Modeling and Visualization (3)** Application of high performance computer modeling to assess and visualize the impact of smoke and heat transfer to buildings, electronic equipment, and on human survivability. In-depth fire hazard analysis case studies. Advanced topics include software performance analysis and parallel processing.

*Registration Permission: Consent of instructor.*

DROP SECONDARY CROSS-LISTED COURSE

**594 Culminating Integrated Project Report (3)** (See Mechanical Engineering 594.)

DROP FOR GRADUATE CREDIT

**400 Senior Design (5)**

## DEPARTMENT OF INDUSTRIAL AND INFORMATION ENGINEERING

### (328) Engineering Management

ADD

**500 Thesis (1-15)**

*Grading Restriction: P/NP only.*

*Repeatability: May be repeated.*

**600 Doctoral Research and Dissertation (3-15)**

*Grading Restriction: P/NP only.*

*Repeatability: May be repeated.*

ADD AND REQUEST VARIABLE TITLE

**595 Special Topics in Engineering Management (3)** Problems and topics relevant to current issues in the field.

*Repeatability: May be repeated if topic differs. Maximum 6 hours.*

**691 Advanced Topics in Engineering Management (3)** Forum to study advanced topics individually or in groups.

*Repeatability: May be repeated if topic differs. Maximum 6 hours.*

### (556) Industrial Engineering

DROP SECONDARY CROSS-LISTED COURSES

**504 Product Development Process (1)** (See Mechanical Engineering 504.)

**506 Product Selection and Evaluation (2)** (See Mechanical Engineering 506.)

**594 Culminating Integrated Project Report (3)** (See Mechanical Engineering 594.)

DROP

**509 Multidisciplinary Project (1)**

**511 Business Planning and Commercialization (3)**

**520 Human Factors and Product Safety Engineering (3)**

**524 Advanced Integrated Manufacturing Systems**

**525 Systems Modeling and Simulation**

**554 Advanced Development of Information Systems (3)**

**555 Advanced Topics in Human-Computer Interactions (3)**

**DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING****(638) Materials Science and Engineering**

## ADD PRIMARY COURSES

**578 Advanced Biomaterials: Biological Applications of Nanomaterials (3)** Focuses on the biological/medical uses of nanoscale materials. Includes the following topics: 0-d, 1-d, and 2-d nanomaterials synthesis and characterization with an emphasis on surface properties. Chemical and biological functionalization of nanomaterials and nano-bio interfaces.

Biological and biomedical application of nanomaterials. (*Same as Biomedical Engineering 578.*)

(DE) Prerequisite(s): 474.

Comment(s): Prior knowledge may satisfy prerequisites, with consent of instructor.

**588 Cell and Tissue-Biomaterials Interaction (3)** Study of the fundamental principles involved in materials /cell and tissue interactions. Students will learn the underlying cellular and molecular mechanisms in host response to biomaterials. Emphasis will be placed on the integration of biomaterials/neuronal cells and tissue interactions into the design of neural implants (sensors, scaffolds, and therapeutics delivery modalities, etc.). (*Same as Biomedical Engineering 588.*)

(DE) Prerequisite(s): 474.

Comment(s): Prior knowledge may satisfy prerequisites, with consent of instructor.

## ADD

**610 Structure and Dynamics of Materials (3)** Focuses on understanding how the structure of a material and the dynamics of its constituent atoms determine its behavior. Topics that will be covered include crystal structure, lattice dynamics, and tensor properties as well as experimental methods used to study these areas.

(DE) Prerequisite(s): 511 and 512.

Comment(s): Prior knowledge may satisfy prerequisites, with consent of instructor.

**611 Fundamentals of Thermodynamics, Phase Transformations, and Material Simulations at Small Length Scales**

**(3)** Covers fundamentals of thermodynamics of materials at small length scales, particularly as related to the dynamics of phase transformations. Topics will include fundamentals of statistical mechanics, mean-field Landau theory of phase transformations, and dynamics of phase transformations. Basics will be illustrated using various simulation methods, including molecular dynamics, Monte Carlo simulations, and phase-field modeling. Topics will be chosen according to time and student's interests.

(DE) Prerequisite(s): 511.

Comment(s): Prior knowledge may satisfy prerequisites, with consent of instructor.

**650 Mechanical Behavior of Solids at Elevated Temperatures (3)** Metals, ceramics, polymers, and composites will be included. Topics include: temperature effect on stress-strain behavior, anelasticity, damping, creep, creep mechanisms, strengthening at high temperatures, creep rupture, deformation map and engineering application, environmental effects, high-temperature indentation, high temperature plastic forming, superplasticity, creep-fatigue interaction, life prediction. Provides scientific knowledge to face and solve material problems encountered in high temperature applications.

(DE) Prerequisite(s): 511 and 512.

Comment(s): Prior knowledge may satisfy prerequisites, with consent of instructor.

**652 High Performance Fibers (3)** Reviews the structure and properties of fibers and fiber formation methods, and discuss the principles of forming high performance fibers. Topics that will be covered include HS HM PE fibers, gel spinning, PVA fibers, HSHM fibers from cellulose, Nylon66 & PET, LC Polymers, fiber formation from LCPs, aromatic fibers, flame resistant organic fibers, carbon fibers, inorganic fibers, nanofibers, optical fibers, biodegradable fibers, absorbent fibers, etc.

(DE) Prerequisite(s): 553.

Comment(s): Prior knowledge may satisfy prerequisites, with consent of instructor.

**666 Nanoindentation and Small-Scale Contact Mechanics (3)** Basic principles of elastic and plastic contact as they influence the measurement of mechanical properties by load and depth sensing indentation methods. Application of nanoindentation techniques to small scale mechanical characterization of metals, ceramics, and polymers.

(DE) Prerequisite(s): 512.

**674 Materials Physics (3)** Starts with the description of the electronic states in regular crystals, and extends it to surfaces, interfaces, defects, amorphous and liquid state and strongly correlated electron systems including magnetism. Also, advanced experimental methods to study the electronic states and atomic structure are discussed.

(DE) Prerequisite(s): 511 and 512.

Comment(s): Prior knowledge may satisfy prerequisites, with consent of instructor.

**675 Advanced Structural Analysis (3)** Introduces graduate students in materials science, physics, chemistry and biochemistry to modern methods of structural characterization using x-rays and neutrons. After a quick review of the basics, theories and practices necessary to carry out and utilize these advanced techniques will be covered.

(DE) Prerequisite(s): 511 and 512.

Comment(s): Prior knowledge may satisfy prerequisites, with consent of instructor.

## DROP SECONDARY CROSS-LISTED COURSE

**594 Culminating Integrated Project Report (3)** *(See Mechanical Engineering 594.)*

## DROP

**552 Fiber Science (3)**

**554 Nonwovens Science and Technology II (3)**

**555 Laboratory Methods in Nonwovens Processing and Characterization (3)**

**570 Optical Microscopy (4)**

**575 Surface Characterization (3)**

**635 Mechanics of Textile Materials (3)**

## REVISE TO CROSS-LIST (PRIMARY COURSE)

**474 Biomaterials (3)** Metals, polymers, and ceramics utilized in orthopedic, cardiovascular, and dental surgical implant devices. Corrosion and degradation problems. Material properties of primary importance and tissue response to synthetic materials. *(Same as Biomedical Engineering 474).*

## REVISE TITLE

**553 Nonwovens Science and Technology (3)**

**DEPARTMENT OF MECHANICAL, AEROSPACE, AND BIOMEDICAL ENGINEERING****(018) Aerospace Engineering**

## ADD SECONDARY CROSS-LISTED COURSE

**547 Modern Linear Controls (3)** *(See Mechanical Engineering 547.)*

**647 Nonlinear Control Systems (3)** *(See Mechanical Engineering 647.)*

**(192) Biomedical Engineering**

## DROP

**408 Cell Tissue and Engineering (3)**

## ADD

**409 Cell Tissue and Engineering (3)** Mammalian cell culture. Effects of mechanical forces on cells. Tissue engineering of cardiovascular and orthopedic devices.

*(DE) Prerequisite(s): Biochemistry and Cellular and Molecular Biology 230 or Biology 140.*

## ADD SECONDARY CROSS-LISTED COURSES

**474 Biomaterials (3)** *(See Materials Science and Engineering 474.)*

**547 Modern Linear Controls (3)** *(See Mechanical Engineering 547.)*

**578 Advanced Biomaterials: Biological Applications of Nanomaterials (3)** *(See Materials Science and Engineering 578.)*

**588 Cell and Tissue-Biomaterials Interaction (3)** *(See Materials Science and Engineering 588.)*

**647 Non Linear Control Systems (3)** *(See Mechanical Engineering 647.)*

## REVISE CREDIT HOURS AND (DE) PREREQUISITE

**430 Biomedical Engineering Laboratory (3)**

*(DE) Prerequisite(s): 345 and Electrical and Computer Engineering 300.*

**(650) Mechanical Engineering**

## DROP PRIMARY CROSS-LISTED COURSES

**504 Product Development Process (1)** *(Same as Industrial Engineering 504.)***506 Product Selection and Evaluation (2)** *(Same as Industrial Engineering 506.)***594 Culminating Integrated Project Report (3)** *(Same as Chemical Engineering 594; Electrical and Computer Engineering 594; Industrial Engineering 594; Materials Science and Engineering 594; Nuclear Engineering 594.)*

## DROP

**510 Prototype Development and Evaluation (3)**

## REVISE PRIMARY COURSE TO ADD CROSS-LISTINGS

**547 Modern Linear Controls (3)** *(Same as Aerospace Engineering 547; Biomedical Engineering 547.)***647 Non Linear Control Systems (3)** *(Same as Aerospace Engineering 647; Biomedical Engineering 647.)***DEPARTMENT OF NUCLEAR ENGINEERING****(716) Nuclear Engineering**

## ADD

**583 Radiation Transport Methods (3)** Application of analytic/deterministic solutions of the Boltzmann transport equation to problems in neutral particle transport. Special emphasis is placed on application of the discrete ordinates method (in forward and adjoint) to deep penetration shielding analysis.*(DE) Prerequisite: 406.**Comment(s): Prior knowledge may satisfy prerequisites, with consent of instructor.***615 Transport Processes in Nuclear Engineering (3)** Rheology of Newtonian and non-Newtonian fluids; integral and system conservation equations for single and multi-component fluids; in-depth development of differential conservation equations for mass, energy, and momentum; exact and approximate solutions of equations of motion; boundary layer analysis; numerical analysis of fluid flow and heat transfer.**640 Nuclear Cross Section Modeling (3)** Nuclear scattering theory and database development applied to neutral and charged particle transport. Methods of calculating total, elastic, inelastic and fragmentation (breakup) cross sections using a variety of nonrelativistic quantum mechanical techniques including partial wave analysis and multiple scattering theory will be presented.*Registration Permission: Consent of instructor.***641 Charged Particle Transport Methods (3)** Transport theory applied to radiation fields consisting of heavy charged particles or electrons. Solution methods utilizing analytical approximations, perturbation theory, the methods of characteristics, and Monte Carlo techniques will be investigated.*(DE) Prerequisite(s): 640.**Comment(s): Prior knowledge may satisfy prerequisite, with consent of instructor.*

## DROP

**512 Transport Processes in Nuclear Engineering (3)****581 Reactor Shielding (3)**

## DROP SECONDARY CROSS-LISTED COURSE

**594 Culminating Integrated Project Report (3)** *(See Mechanical Engineering 594.)*

## **II. PROGRAM CHANGES**

### **INTERDEPARTMENTAL**

- ADD CONCENTRATION – MATERIALS SCIENCE AND ENGINEERING – MS – TO THE RELIABILITY AND MAINTAINABILITY ENGINEERING MAJOR

On page 137 of the 2007-2008 *Graduate Catalog*, left column, add the above concentration to the introductory paragraph.

On page 145 of the 2007-2008 *Graduate Catalog*, right column, add the above concentration and major to the majors listing.

#### **Reliability and Maintainability Engineering – MS** Materials Science and Engineering concentration

#### **REVISE TEXT – DUAL MS-MBA**

On page 138 of the 2007-2008 *Graduate Catalog*, left column, replace the first paragraph with the following and in the second paragraph remove the last sentence that begins "Since the.."

And, under the headings Admission and Requirements delete the current text and replace as shown below.

#### **DUAL MS-MBA PROGRAM – ENGINEERING**

The College of Business Administration and the College of Engineering offer an integrated program leading to the conferral of the Master of Business Administration degree with a major in business administration (concentration in operations management) and the Master of Science with a major in computer science or one of the following engineering majors – aerospace, biomedical, civil, chemical, computer, electrical, engineering science, environmental, industrial, materials science, mechanical, and nuclear engineering. (Refer to each major for specific information and requirements.)

##### **Admission**

Applications are accepted for fall semester only. Applicants for the MS-MBA program must make separate applications to and be accepted by Graduate and International Admissions for the Master of Business Administration and the computer science major or one of the following engineering majors – aerospace, biomedical, chemical, civil, computer, electrical, engineering science, environmental, industrial, materials science, mechanical, or nuclear engineering, and by the Dual Program Committee.

Students will initially apply for the MBA program, indicating on their application the intent to pursue the dual MS-MBA program and the appropriate engineering major (refer to the MBA program for separate instructions). Students accepted for both the MBA and one of the engineering programs or computer science will be assigned to Dual Program Committee advisors, who will be responsible for course approval and supervision of the students' progress through the dual program.

Applications by United States citizens and permanent residents received after the MBA application deadline (February 1) will be considered as space allows. Additional information is required and different application dates are established by Graduate and International Admissions for international students.

##### **Requirements**

All engineering and computer science students enrolled in the dual program must complete coursework designed to provide them with an integrated, multidisciplinary experience. The MS – MBA curriculum consists of 37 hours of coursework in the College of Business Administration and 24 hours of coursework in the College of Engineering. A final examination as required by their respective Engineering Program Committee is to be taken during their final semester.

The majority of programs in the College of Engineering give the students the option of taking up to 6 hours of their College of Engineering coursework in topics relating to the design and development of devices, processes and/or software. All students must have a course work plan approved by their respective program during their first semester in the program. The coursework for each program is designed to provide students with advanced skills in their major.

For additional requirements for the Master of Science degree with majors in aerospace engineering, biomedical engineering, chemical engineering, civil engineering, computer engineering, computer science, electrical engineering, engineering science, environmental engineering, industrial engineering, materials science and engineering, mechanical engineering, or nuclear engineering, refer to program descriptions for those majors.

The dual degree candidate must satisfy the curriculum and graduation requirements of the College of Engineering majors being pursued and the College of Business Administration.

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 MS and the MBA degrees will be awarded upon successful completion of the requirements of the dual program.

**Approved Dual Credit**

A maximum of 15 hours of the common program courses completed in the College of Engineering may be counted toward the MBA degree program.

## **DEPARTMENT OF CHEMICAL AND BIOMOLECULAR ENGINEERING (FORMERLY DEPARTMENT OF CHEMICAL ENGINEERING)**

### **REVISE DUAL MS-MBA - CHEMICAL ENGINEERING MAJOR**

On page 139 of the 2007-2008 *Graduate Catalog*, revise showcase to:

**DUAL MS-MBA****Chemical Engineering Major**

<b>August – First Year</b>	<b>Hours Credit</b>
Business Administration 511 (MBA Core I) . . . . .	3
<b>Fall – First Year</b>	
Business Administration 501 (MBA Career Development). . . . .	1
Business Administration 512 (MBA Core II) . . . . .	15
<b>Spring</b>	
Business Administration 513 (MBA Core III) . . . . .	9
MBA Hub Elective. . . . .	3
Engineering Major <sup>1</sup> . . . . .	3
<b>Summer</b>	
Engineering Major <sup>1</sup> / Math. . . . .	6
<b>Fall – Second Year</b>	
Engineering Major <sup>1</sup> . . . . .	6
MBA Innovative & Entrepreneurship Elective . . . . .	6
<b>Spring</b>	
Engineering Major <sup>1</sup> . . . . .	9
	<b>Total 61</b>

<sup>1</sup>Engineering Major courses must be selected to satisfy Chemical Engineering major degree requirements.

## **DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING**

- **DROP THE FOLLOWING CONCENTRATIONS – ENVIRONMENTAL ENGINEERING MAJOR – MS**

- Air Quality
- Environmental Risk Assessment
- Mixed Waste Management
- Waste Management
- Water Quality
- Water Resources

- **ADD THE FOLLOWING CONCENTRATION – ENVIRONMENTAL ENGINEERING MAJOR – MS**

- Water Resources Engineering

### **REVISE ENVIRONMENTAL ENGINEERING MAJOR - MS**

On pages 140 to 141 of the 2007-2008 *Graduate Catalog* delete current text and replace with:

For the Master of Science with a major in environmental engineering, normally a bachelor's degree in a field of engineering is required. For a student who does not have an engineering background, the following minimum prerequisite courses will be required – Engineering Fundamentals 151, 152; Statistics 251; Civil Engineering 380, 390, and 416; Mathematics 141, 142, 231, 241; Chemistry 120, 130. In general, these must be completed with a B average before courses for graduate credit can be taken. The Department of Civil and Environmental Engineering offers both thesis and non-thesis options for the Master of Science with a major in environmental engineering. Either option must be approved by the student's major professor. Both options require completion of the following core courses: 511, 512, and 513. In addition, students must complete one of the following two sequences: 550, 558, 574 (environmental engineering) or 520, 535 (water resources).



**Thesis Option**

A minimum of 30 semester hours of approved graduate courses, including 6 hours of thesis is required. A minor may be selected but is not required.

**Non-Thesis Option**

A minimum of 33 semester hours of approved graduate courses is required. This may include a 3-hour special problems course to be completed under the direction of the student's major professor. The major includes a minimum of 24 semester hours of approved environmental engineering coursework. A minor may be selected but is not necessarily required.

- ADD DUAL MS-MBA – CIVIL ENGINEERING MAJOR
- ADD DUAL MS-MBA – ENVIRONMENTAL ENGINEERING MAJOR

INSERT THE SHOWCASE BELOW AFTER THE REVISED TEXT ABOVE.

**DUAL MS-MBA****Civil Engineering Major - Environmental Engineering Major**

<b>August – First Year</b>	<b>Hours Credit</b>
Business Administration 511 (MBA Core I) . . . . .	3
<b>Fall – First Year</b>	
Business Administration 501 (MBA Career Development). . . . .	1
Business Administration 512 (MBA Core II) . . . . .	15
<b>Spring</b>	
Business Administration 513 (MBA Core III) . . . . .	9
MBA Hub Elective <sup>1</sup> . . . . .	3
Engineering Major <sup>1</sup> . . . . .	3
<b>Summer</b>	
Engineering Major <sup>1</sup> / Math. . . . .	6
<b>Fall – Second Year</b>	
Engineering Major <sup>1</sup> . . . . .	6
MBA Innovative & Entrepreneurship Elective . . . . .	6
<b>Spring</b>	
Engineering Major <sup>1</sup> . . . . .	9
	<b>Total 61</b>

<sup>1</sup>Engineering Major courses must be selected to satisfy civil engineering or environmental engineering major degree requirements.

## **DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE (FORMERLY DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING)**

MOVE COMPUTER SCIENCE MAJOR (MS & PHD) AND THE COMPUTER SCIENCE AND INTERDISCIPLINARY IN COMPUTATIONAL SCIENCE MINORS

On pages 141-143 of the 2007-2008 *Graduate Catalog*, change catalog text to reflect the merger of the departments of Computer Science and Electrical and Computer Engineering. Replace current catalog text with the following.

The Department of Electrical Engineering and Computer Science was recently formed after the merger of the Department of Computer Science and the Department of Electrical and Computer Engineering. The Department of Electrical Engineering and Computer Science offers graduate programs leading to the Master of Science and Doctor of Philosophy with majors in electrical engineering, computer engineering, or computer science.

The departmental graduate committee is responsible for administering, promoting, and advancing the general well being of the graduate program. Departmental actions regarding a graduate student may be appealed in writing, first to the departmental graduate committee and then to the department faculty. The requirements outlined below provide additional details regarding the graduate program requirements.

**MASTER OF SCIENCE**

Graduate work leading to the Master of Science with a major in electrical engineering, computer engineering, or computer science may be completed during three semesters of full-time study or two to three years of part-time study.

**COMPUTER SCIENCE MAJOR****Admission**

Two semesters of calculus plus two additional semesters of college mathematics (e.g. linear algebra, differential equations, probability) and a course in formal languages, as well as in systems programming, are required for admission. Applicants are required to submit scores from the general Graduate Record Examination (GRE) within the past three years and to have these scores sent to the Office of Graduate and International Admissions. Applicants whose native language is not English, including those who have earned degrees at U.S. institutions, must score at least 213 on the computer-based TOEFL exam, 550 on the written exam, or 80 on the Internet-based Test to be considered for admission to the program. The score must be no more than two years old from the requested date of entry. Applicants who have received a degree from an accredited U.S. institution within the past two years are exempt from the TOEFL requirement. Applicants for admission to the MS program for computer science are expected to have completed a bachelor's degree in computer science or computer engineering with an average of at least 3.00 out of 4.00, both overall and in the senior year. Applicants who hold the bachelor's degree in other fields are also expected to have a minimum cumulative grade-point average of 3.00 and a minimum senior year average of 3.00 in that field. The department will require that selected undergraduate courses be taken as determined by the applicant's prior education and experience. The student will be admitted under non-degree status until the required undergraduate courses are successfully completed with a 3.00 average. An international student may not enroll as a non-degree student.

**Requirements**

Students may choose between a thesis option, a non-thesis course-only option, and a non-thesis project option. All students must file a Master's Program Plan with the departmental graduate committee specifying which option they have selected, a semester-by-semester schedule of the courses they intend to take, and the members of the student's master's committee. Students may change between options one time by filing an amended Master's Program Plan and with approval of the departmental graduate committee. A student who receives financial support under a research assistantship is enrolled in the thesis option by default. Students who have held a research assistantship will require approval from the departmental graduate committee to change to one of the non-thesis options.

**Thesis Option (30 hours)**

Students are required to complete Computer Science 530, 560, and either 580 or 581. An additional 15 hours of 400-level or above work in the department, with at least 9 hours of 500-level or 600-level work. Graduate courses taken outside the department are sometimes allowed but must be approved by the student's master committee and the graduate committee before enrollment. A master's thesis, Computer Science 500, totaling 6 hours is required.

**Non-Thesis Option (30 hours)**

Students are required to complete CS530, CS560, and either CS580 or CS581. An additional 21 hours of 400-level or above work in the department, with at least 15 hours of 500-level or 600-level work. Graduate courses taken outside the department are sometimes allowed but must be approved by the student's master committee and the graduate committee before enrollment. The student must take coursework in an area to prepare for the non-thesis master's examination. The student's advisor must verify that an acceptable set of courses has been taken before the student may schedule the examination. Information concerning the examination is available in the departmental office.

**Project in Lieu of Thesis Option (30 hours)**

Students are required to complete Computer Science 530, 560, and either 580 or 581. An additional 18 hours of 400-level or above work in the department, with at least 12 hours of 500-level or 600-level work. Graduate courses taken outside the department are sometimes allowed but must be approved by the student's master committee and the graduate committee before enrollment. Computer Science 501 (Project in Lieu of Thesis) with a minimum grade of B is required. This course will be administered by the student's master's committee. A written project proposal describing what the student will do in the course must be submitted in advance for the student's master's committee approval. A written final report and oral presentation is required and one copy of the final draft must be submitted to the graduate committee.

- ADD DUAL MS-MBA – COMPUTER SCIENCE MAJOR

**DUAL MS-MBA****Computer Science Major**

<b>August – First Year</b>	<b>Hours Credit</b>
Business Administration 511 (MBA Core I)	3
<b>Fall – First Year</b>	
Business Administration 501 (MBA Career Development)	1
Business Administration 512 (MBA Core II)	15
<b>Spring</b>	
Business Administration 513 (MBA Core III)	9
MBA Hub Elective	3
EECS Course <sup>1</sup>	3
<b>Summer</b>	
Departmental Courses/Math <sup>1</sup>	6

**Fall – Second Year**

EECS Courses <sup>1</sup>	6
MBA Innovative and Entrepreneurship Elective	6

**Spring**

EECS Courses <sup>1</sup>	9
<b>Total</b>	<b>61</b>

<sup>1</sup>The EECS courses taken for the dual MS-MBA degree must include Computer Science 530, 560, and either 580 or 581.

**COMPUTER ENGINEERING MAJOR****Admission**

Applicants for admission to the MS program for computer engineering are expected to have completed a bachelor's degree in electrical engineering or computer engineering with an average of at least 3.00 out of 4.00, both overall and in the senior year. Applicants are required to submit scores from the general Graduate Record Examination (GRE) within the past three years and to have these scores sent to the Office of Graduate and International Admissions. Applicants whose native language is not English, including those who have earned degrees at U.S. institutions, must score at least 213 on the computer-based TOEFL exam, 550 on the written exam, or 80 on the Internet-based Test to be considered for admission to the program. The score must be no more than two years old from the requested date of entry. Applicants who have received a degree from an accredited U.S. institution within the past two years are exempt from the TOEFL requirement. Applicants who hold the bachelor's degree in other fields of engineering, computer science, mathematics, or the physical sciences are also expected to have a minimum cumulative grade-point average of 3.00 and a minimum senior year average of 3.00 in that field. The department will require that selected undergraduate courses be taken as determined by the applicant's prior education and experience. The student will be admitted under non-degree status until the required undergraduate courses are successfully completed with a 3.00 average. An international student may not enroll as a non-degree student.

**Requirements**

Students may choose between a thesis option, a non-thesis course-only option, and a non-thesis project option. All students must file a Master's Program Plan with the departmental graduate committee specifying which option they have selected, a semester-by-semester schedule of the courses they intend to take, and the members of the student's master's committee. Students may change between options one time by filing an amended Master's Program Plan and with approval of the departmental graduate committee. A student who receives financial support under a research assistantship is enrolled in the thesis option by default. Students who have held a research assistantship will require approval from the departmental graduate committee to change to one of the non-thesis options.

**Thesis Option (30 hours)**

Six semester hours of mathematics at the 400-level\* or above, selected from a list approved by the graduate committee; or 6 semester hours of courses in the department at the 500 level or above; or 6 semester hours of courses outside the department approved by the student's master committee and the graduate committee. An additional 18 semester hours of 400-level\* or above work in the department, with at least 6 hours selected from the following 7 courses: Electrical and Computer Engineering 551 through 557. A master's thesis (Electrical and Computer Engineering 500), totaling 6 hours is required, as well as a final oral exam covering the thesis and related coursework.

**Non-Thesis Courses Only Option (30 hours)**

Six semester hours of mathematics at the 400-level\* or above, selected from a list approved by the graduate committee; or 6 semester hours of courses in the department at the 500-level or above; or 6 semester hours of courses outside the department approved by the student's master committee and the graduate committee. An additional 24 semester hours of 400-level\* or above courses in the department with 18 of the hours at the 500-level or 600-level. Of the 18 hours required at the graduate level, at least 6 hours should be selected from the following 7 courses: Electrical and Computer Engineering 551 through 557. A final comprehensive written examination. Information concerning the examination is available in the departmental office.

**Non-Thesis Project Option (30 hours)**

Six semester hours of mathematics at the 400-level\* or above, selected from a list approved by the graduate committee; or 6 semester hours of courses in the department at the 500-level or above; or 6 semester hours of courses outside the department approved by the student's master committee and the graduate committee. An additional 21 semester hours of 400-level\* or above courses in the department, with 15 of the hours at the 500-level or 600-level. Of the 15 hours required at the graduate level, at least 6 hours should be selected from the following 7 courses: Electrical and Computer Engineering 551 through 557. Electrical and Computer Engineering 501 (Project in Lieu of Thesis) with a minimum grade of B. This course will be administered by the student's master's committee. A written project proposal describing what the student will do in the course must be submitted in advance for the student's master's committee approval. A written final report and oral presentation is required and one copy of the final draft must be submitted to the graduate committee. A final written and oral examination covering the project and related coursework.

\*NOTE: At least two thirds of the minimum required hours must be taken in courses numbered at or above the 500 level.

**DUAL MS-MBA****Computer Engineering Major**

<b>August – First Year</b>	<b>Hours Credit</b>
Business Administration 511 (MBA Core I)	3
<b>Fall – First Year</b>	
Business Administration 501 (MBA Career Development)	1
Business Administration 512 (MBA Core II)	15
<b>Spring</b>	
Business Administration 513 (MBA Core III)	9
MBA Hub Elective	3
Departmental Course	3
<b>Summer</b>	
Departmental Courses/Math	6
<b>Fall – Second Year</b>	
Departmental Courses	6
MBA Innovative & Entrepreneurship Elective	6
<b>Spring</b>	
Departmental Courses	9
<b>Total</b>	<b>61</b>

**ELECTRICAL ENGINEERING MAJOR****Admission**

Applicants for admission to the MS program for electrical engineering are expected to have completed a bachelor's degree in electrical engineering or computer engineering with an average of at least 3.00 out of 4.00, both overall and in the senior year. Applicants are required to submit scores from the general Graduate Record Examination (GRE) within the past three years and to have these scores sent to the Office of Graduate and International Admissions. Applicants whose native language is not English, including those who have earned degrees at U.S. institutions, must score at least 213 on the computer-based TOEFL exam, 550 on the written exam, or 80 on the Internet-based Test to be considered for admission to the program. The score must be no more than two years old from the requested date of entry. Applicants who have received a degree from an accredited U.S. institution within the past two years are exempt from the TOEFL requirement. Applicants who hold the bachelor's degree in other fields of engineering, computer science, mathematics, or the physical sciences are also expected to have a minimum cumulative grade-point average of 3.00 and a minimum senior year average of 3.00 in that field. The department will require that selected undergraduate courses be taken as determined by the applicant's prior education and experience. The student will be admitted under non-degree status until the required undergraduate courses are successfully completed with a 3.00 average. An international student may not enroll as a non-degree student.

**Requirements**

Students may choose between a thesis option, a non-thesis course-only option, and a non-thesis project option. All students must file a Master's Program Plan with the departmental graduate committee specifying which option they have selected, a semester-by-semester schedule of the courses they intend to take, and the members of the student's master's committee. Students may change between options one time by filing an amended Master's Program Plan and with approval of the departmental graduate committee. A student who receives financial support under a research assistantship is enrolled in the thesis option by default. Students who have held a research assistantship will require approval from the departmental graduate committee to change to one of the non-thesis options.

**Thesis Option (30 hours)**

Six semester hours of mathematics at the 400-level\* or above, selected from a list approved by the graduate committee; or 6 semester hours of Electrical and Computer Engineering courses at the 500-level or above; or 6 semester hours of non-Electrical and Computer Engineering courses approved by the student's master committee and the graduate committee. An additional 18 semester hours of 400-level\* or above work in electrical and computer engineering, with at least 6 hours of 500-level or 600-level work in each of two areas of electrical and computer engineering. A master's thesis (Electrical and Computer Engineering 500), totaling 6 hours is required, as well as a final oral exam covering the thesis and related coursework.

**Non-Thesis Courses Only Option (30 hours)**

Six semester hours of mathematics at the 400-level\* or above, selected from a list approved by the graduate committee; or 6 semester hours of Electrical and Computer Engineering courses at the 500-level or above; or 6 semester hours of non-Electrical and Computer Engineering courses approved by the student's master committee and the graduate committee. An additional 24 semester hours of 400-level\* or above work in electrical engineering or computer engineering with 18 of the hours at the 500-level or 600-level. Of the 18 hours required at the graduate level, at least 6 must be in each of two areas of electrical and computer engineering and an additional 6 hours outside of the two areas. A final comprehensive written examination. Information concerning the examination is available in the departmental office.

**Non-Thesis Project Option (30 hours)**

Six semester hours of mathematics at the 400-level\* or above, selected from a list approved by the graduate committee; or 6 semester hours of Electrical and Computer Engineering courses at the 500-level or above; or 6 semester hours of non-Electrical and Computer Engineering courses approved by the student's master committee and the graduate committee. An additional 21 semester hours of 400-level\* or above work in electrical engineering or computer engineering, with 15 of the hours at the 500-level or 600-level. Of the 15 hours required at the graduate level, at least 6

must be in each of two areas of electrical and computer engineering and an additional 3 hours of work outside of the two areas. Electrical and Computer Engineering 501 (Project in Lieu of Thesis) with a minimum grade of B. This course will be administered by the student's master's committee. A written project proposal describing what the student will do in the course must be submitted in advance for the student's master's committee approval. A written final report and oral presentation is required and one copy of the final draft must be submitted to the graduate committee. A final written and oral examination covering the project and related coursework.

\*NOTE: At least two thirds of the minimum required hours must be taken in courses numbered at or above the 500 level.

#### **DUAL MS-MBA**

##### **Electrical Engineering Major**

<b>August – First Year</b>	<b>Hours Credit</b>
Business Administration 511 (MBA Core I)	3
<b>Fall – First Year</b>	
Business Administration 501 (MBA Career Development)	1
Business Administration 512 (MBA Core II)	15
<b>Spring</b>	
Business Administration 513 (MBA Core III)	9
MBA Hub Elective	3
ECE Course	3
<b>Summer</b>	
Departmental Courses/Math	6
<b>Fall – Second Year</b>	
ECE Courses	6
MBA Innovative & Entrepreneurship Elective	6
<b>Spring</b>	
ECE Courses	9
<b>Total</b>	<b>61</b>

#### **DOCTOR OF PHILOSOPHY COMPUTER SCIENCE MAJOR**

##### **Admission**

The PhD is offered with a major in computer science. A student seeking admission to the PhD program is expected to meet the following requirements. The student should have three letters of recommendation sent directly to the department head from individuals capable of assessing the student's potential for advanced work in computer science (for example, college faculty or employers for whom the student has worked after earning a bachelor's degree). The department reserves the right to contact these individuals or other knowledgeable people if additional information is deemed necessary or desirable. Applicants are required to submit scores from the general Graduate Record Examination (GRE) within the past three years and to have these scores sent to the Office of Graduate and International Admissions. A TOEFL score of 550 on the written exam, 213 on the computer exam, or 80 on the Internet-based Test is required for non-native speakers of English, including those who have earned degrees at U.S. institutions. The score must be no more than two years old from the requested date of entry. Applicants who have received a degree from an accredited U.S. institution within the past two years are exempt from the TOEFL requirement. Applicants should satisfy the same background requirements as for the computer science master's program.

##### **Requirements**

Original research reported in a dissertation of high quality is emphasized. The minimum hour requirements are 24 hours of Computer Science 600 Doctoral Research and Dissertation and 24 hours of graduate courses beyond the equivalent of a master's degree (i.e., beyond 30 graduate hours) graded A-F. Computer Science 530, 560 and 580 or 581 are required for the degree. At least 6 hours of 600-level graded courses must be taken in computer science at the University of Tennessee, Knoxville. The student's advisor and committee will establish the specific course requirements. The comprehensive examination consists of a departmental written examination and a subsequent oral examination conducted by the student's committee.

#### **COMPUTER ENGINEERING MAJOR**

The PhD is offered with a major in computer engineering. Exceptional students holding the bachelor's degree may be admitted to the doctoral program without first obtaining a master's degree. Candidates holding the MS must satisfy requirements 2 through 7 below while candidates holding only the BS must satisfy requirements 1 through 7. Applicants are required to submit scores from the general Graduate Record Examination (GRE) within the past three years and to have these scores sent to the Office of Graduate and International Admissions. A TOEFL score of 550 on the written exam, 213 on the computer exam, or 80 on the Internet-based Test is required for non-native speakers of English, including those who have earned degrees at U.S. institutions. The score must be no more than two years old from the requested date of entry. Applicants who have received a degree from an accredited U.S. institution within the past two years are exempt from the TOEFL requirement. Specific departmental requirements for the PhD include the following.

1. For students holding only a BS, a minimum of 48 hours is required. Exceptional PhD students may request that course hour requirements of 48 hours beyond the BS degree be reduced to a lesser number, but not less than 39 hours beyond the BS. Request for this reduction is to be initiated by the student's PhD dissertation committee. The student's

major professor, with the concurrence of the dissertation committee, will prepare a curriculum plan showing exactly what courses will be taken and provide a justification as to why a reduced course hour requirement is appropriate. The request will be submitted to the Graduate Committee for approval. The Graduate Committee may approve/deny or modify the requested reduction. Any reduction in course hours granted will be contingent upon successful completion of all other PhD requirements under the supervision of the major professor and dissertation committee in place at the time of the request for reduction in course hour requirements. An approved reduction in course hour requirement will be automatically rescinded, unless reinstated by the Graduate Committee, if the student makes a subsequent change in the dissertation committee. The minimum dissertation hours required of students receiving approval for reduced course hours (normally 24) will be increased by exactly the amount of the reduction in required course hours. The first 24 hours should satisfy

- a. Six semester hours of mathematics at the 400-level\* or above, selected from a list approved by the graduate committee; or 6 semester hours of courses in the department at the 500-level or above; or 6 hours of courses outside the department approved by the student's master committee and the graduate committee.
  - b. An additional 18 semester hours of 400-level\* or above work in the department, with at least 6 hours selected from the following 7 courses: Electrical and Computer Engineering 551 through 557. In addition, the student must satisfy requirements 2 through 7 below.
2. For students holding an MS, a minimum of 24 semester hours of coursework, excluding research and dissertation credit or seminar courses, must be taken at the University of Tennessee, Knoxville. These hours must include the following.
    - a. A minimum of 12 hours in the department at the 500 and 600 levels.
    - b. A minimum of 9 hours of 600-level coursework. At least 3 hours of this work must be in an area other than the student's major area.
    - c. A minimum of 6 hours of mathematics at the 500-level or above and approved by the departmental graduate committee.
  3. Satisfactory performance on a qualifying examination. The qualifying examination is prepared by the Electrical Engineering and Computer Science faculty and consists of a written examination covering courses required in the undergraduate electrical and computer engineering curriculum. Information concerning the qualifying examination is available in the departmental office. The qualifying examination is offered twice each year (January and August), and a student is to take it the first time it is offered after the student enrolls in the program. A student who fails the qualifying examination must take and pass the examination the next time it is offered to remain in the program. A minimum of 12 hours of coursework must be completed after the student has taken the qualifying examination the first time.
  4. Satisfactory performance on a comprehensive examination administered by the student's committee. The exam results are reported to the graduate committee for approval and the exam is filed in the department. The comprehensive exam is given when the student is ready to apply for admission to candidacy. The comprehensive examination consists of both written and oral parts. The written part consists of a complete review of the literature in the student's dissertation topic and a review of the major tools to be used in the dissertation work. The student's committee may require additional written sections. The student must demonstrate a mastery of the dissertation area, ability to think analytically and creatively, skill in using academic resources, and ability to complete the dissertation satisfactorily. The oral part of the comprehensive examination consists primarily of a professional presentation of a proposal for dissertation work and its defense. The committee may cover additional topics in the oral part.
  5. Participation in departmental seminars.
  6. A minimum of 24 hours of doctoral dissertation.
  7. Successful public defense of the dissertation by the student.

\*NOTE: At least two thirds of the minimum required hours must be taken in courses numbered at or above the 500 level.

### **ELECTRICAL ENGINEERING MAJOR**

The PhD is offered with a major in electrical engineering. Exceptional students holding the bachelor's degree may be admitted to the doctoral program without first obtaining a master's degree. Candidates holding the MS must satisfy requirements 2 through 7 below while candidates holding only the BS must satisfy requirements 1 through 7. Applicants are required to submit scores from the general Graduate Record Examination (GRE) within the past three years and to have these scores sent to the Office of Graduate and International Admissions. A TOEFL score of 550 on the written exam, 213 on the computer exam, or 80 on the Internet-based Test is required for non-native speakers of English, including those who have earned degrees at U.S. institutions. The score must be no more than two years old from the requested date of entry. Applicants who have received a degree from an accredited U.S. institution within the past two years are exempt from the TOEFL requirement. Specific departmental requirements for the PhD include the following.

1. For students holding only a BS, a minimum of 48 course hours is required. Exceptional PhD students may request that course hour requirements of 48 hours beyond the BS degree be reduced to a lesser number, but not less than 39 hours beyond the BS. Request for this reduction is to be initiated by the student's PhD dissertation committee. The student's major professor, with the concurrence of the dissertation committee, will prepare a curriculum plan showing exactly what courses will be taken and provide a justification as to why a reduced course hour requirement is appropriate. The request will be submitted to the Graduate Committee for approval. The Graduate Committee may approve/deny or modify the requested reduction. Any reduction in course hours granted will be contingent upon successful completion of all other PhD requirements under the supervision of the major professor and dissertation committee in place at the time of the request for reduction in course hour requirements. An approved reduction in course hour requirement will be automatically rescinded, unless reinstated by the Graduate Committee, if the student makes a subsequent change in the dissertation committee. The minimum dissertation hours required of students receiving approval for reduced course hours

(normally 24) will be increased by exactly the amount of the reduction in required course hours. The first 24 hours should satisfy

- a. 6 semester hours of mathematics at the 400-level\* or above, selected from a list approved by the graduate committee; or 6 semester hours of Electrical and Computer Engineering courses at the 500-level or above; or 6 semester hours of non- Electrical and Computer Engineering courses approved by the student's master committee and the graduate committee.
- b. An additional 18 semester hours of 400-level\* or above work in electrical and computer engineering, with at least 6 hours of 500-level or 600-level work in each of two areas of electrical and computer engineering. In addition, the student must satisfy requirements 2 through 7 below.
2. For students holding an MS, a minimum of 24 semester hours of coursework, excluding research and dissertation credit or seminar courses, must be taken at the University of Tennessee, Knoxville. These hours must include the following.
  - a. A minimum of 12 semester hours in electrical and computer engineering at the 500- and 600-levels.
  - b. A minimum of 9 semester hours of 600-level coursework. At least 3 hours of this work must be in an area other than the student's major area.
  - c. A minimum of 6 hours of mathematics at the 500-level or above and approved by the departmental graduate committee.
3. Satisfactory performance on a qualifying examination. The qualifying examination is prepared by the Electrical Engineering and Computer Science faculty and consists of a written examination covering courses required in the undergraduate electrical and computer engineering curriculum. Information concerning the qualifying examination is available in the departmental office. The qualifying examination is offered twice each year (January and August), and a student is to take it the first time it is offered after the student enrolls in the program. A student who fails the qualifying examination must take and pass the examination the next time it is offered to remain in the program. A minimum of 12 hours of coursework must be completed after the student has taken the qualifying examination the first time.
4. Satisfactory performance on a comprehensive examination administered by the student's committee. The exam results are reported to the graduate committee for approval and the exam is filed in the department. The comprehensive exam is given when the student is ready to apply for admission to candidacy. The comprehensive examination consists of both written and oral parts. The written part consists of a complete review of the literature in the student's dissertation topic and a review of the major tools to be used in the dissertation work. The student's committee may require additional written sections. The student must demonstrate a mastery of the dissertation area, ability to think analytically and creatively, skill in using academic resources, and ability to complete the dissertation satisfactorily. The oral part of the comprehensive examination consists primarily of a professional presentation of a proposal for dissertation work and its defense. The committee may cover additional topics in the oral part.
5. Participation in departmental seminars.
6. A minimum of 24 hours of doctoral dissertation.
7. Successful public defense of the dissertation by the student.

\*NOTE: At least two thirds of the minimum required hours must be taken in courses numbered at or above the 500 level.

#### **COMPUTER SCIENCE MINOR**

The graduate minor consists of any two of the four core courses (Computer Science 530, 560, 580, 581) plus an additional 3 hours of graded computer science graduate-level courses at or above the 400-level.

#### **INTERCOLLEGIATE/INTERDISCIPLINARY GRADUATE MINOR IN COMPUTATIONAL SCIENCE (IGMCS)**

The Department of Electrical Engineering and Computer Science participates in the intercollegiate/interdisciplinary graduate minor in computational science (IGMCS) program. Any student pursuing a master's or PhD with a major in computer science, computer engineering, or electrical engineering can receive a minor in computational science by completing the appropriate IGMCS requirements. For further information, see the description of the IGMCS below. The Department of Electrical Engineering and Computer Science also contributes courses to the IGMCS program curriculum.

The intercollegiate/interdisciplinary graduate minor in computational science (IGMCS) is a formal academic program at the University of Tennessee established to allow students to earn a minor in Computational Science simultaneously with a master's or doctorate in another academic discipline. The program is open to graduate students in all departments, which have an approved minor. The program is administered by a committee composed of representatives, including program faculty, from all colleges that have approved the IGMCS program and which have minor programs.

#### **Requirements**

<b>Degree Program</b>	<b>Hours in Approved IGMCS Courses</b>
Master's in home department, minor in computational science	9
Doctorate in home department, minor in computational science	15

Computational Science is an emerging field of study that is truly interdisciplinary, with participating faculty from Mathematics, Electrical Engineering and Computer Science, and many domain sciences across the curriculum that have embraced computationally intensive methods. Since computational science demands some basic level of understanding and skill in all three of these discipline clusters, the IGMCS program is designed to provide students seeking an advanced degree in one of these three areas with the knowledge and experience in the other two that is necessary to round out their education. Course options consist of courses in Mathematics, Information Sciences, Electrical Engineering and Computer

Science and other participating departments selected according to a plan approved by the respective home departments, which then must be approved by the IGMCS Program Committee.

#### Procedures

The student's home department (i.e. the department in which the student is currently pursuing an advanced degree) must have approved a program of courses with the IGMCS Program Committee prior to declaration of the IGMCS minor. That program will specify the sequences of computational science courses, selected from the IGMCS approved list, which are considered appropriate by the home department, and the home department must verify fulfillment of non-computational science degree requirements. Students wishing to participate in this program should contact their college representatives or the Chair of the IGMCS Program Committee.

The student's graduate committee must include a member of the IGMCS faculty.

The student's Admission to Candidacy form must contain all courses required for the chosen degree program delineated and labeled "Computational Science courses required for the minor in computational science." Should the student decide not to apply for admission to the program until after completion of some of the courses, the student's major professor should file a program change with the cooperating departments and assist the student in obtaining an IGMCS faculty member to serve on the student's graduate committee.

Successful completion of the minor in computational science is recognized by appropriate documentation on the student's transcript. Students who do not complete the requirements of the minor will still receive academic credit for the computational science courses they have successfully completed. For more information contact Dr. Terry Moore at [tmoores@eecs.utk.edu](mailto:tmoores@eecs.utk.edu) or visit <http://igmcs.utk.edu>.

## DEPARTMENT OF INDUSTRIAL AND INFORMATION ENGINEERING

- DROP THE FOLLOWING CONCENTRATIONS – INDUSTRIAL ENGINEERING MAJOR – MS
  - Human Factors Engineering
  - Information Engineering
  - Manufacturing Systems Engineering
  - Traditional Industrial Engineering
- DROP THE FOLLOWING CONCENTRATION – INDUSTRIAL ENGINEERING MAJOR – MS-MBA
  - Product Development and Manufacturing

REVISE INDUSTRIAL ENGINEERING MAJOR - MS

On page 144 of the 2007-2008 *Graduate Catalog*, left column, revise to

#### MASTER OF SCIENCE

##### INDUSTRIAL ENGINEERING MAJOR

Students who enroll in the Master of Science program may select a concentration in engineering management. This concentration allows a student to select either a thesis or non-thesis option. The thesis option requires 27 hours of coursework and 6 hours thesis. The non-thesis option requires 30 hours of coursework and a 3-hour design project. The engineering management concentration requires an additional 3 hours.

REVISE DUAL MS-MBA REQUIREMENTS – INDUSTRIAL ENGINEERING MAJOR

#### DUAL MS-MBA

##### Industrial Engineering Major

	Hours Credit
<b>August – First Year</b>	
Business Administration 511 MBA Core I .....	3
<b>Fall – First Year</b>	
Business Administration 501 MBA Career Development. ....	1
Business Administration 512 MBA Core II .....	15
<b>Spring</b>	
Business Administration 513 MBA Core III .....	9
MBA Hub Elective .....	3
Industrial Engineering Core Course* .....	3
<b>Summer</b>	
Internship .....	–
Industrial Engineering Core Course*/Statistics .....	6
<b>Fall – Second Year</b>	
Industrial Engineering Core Course* .....	6



MBA Innovative & Entrepreneurship Elective . . . . . 6

**Spring**

Industrial Engineering or related courses . . . . .9

**Total 61**

\* Industrial Engineering Core Courses consist of: 516, 518, 522, and 526.

## DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

- DROP THE FOLLOWING CONCENTRATION – MATERIALS SCIENCE AND ENGINEERING MAJOR – MS - PHD  
Textiles.
- DROP THE FOLLOWING CONCENTRATION – POLYMER ENGINEERING MAJOR – MS AND PHD  
Textile Science.

### REVISE REQUIREMENTS SECTION TO DELETE TEXT CONCERNING TEXTILES CONCENTRATION

On page 146 of the 2007-2008 *Graduate Catalog* revise left column, 1<sup>st</sup> bullet, 2<sup>nd</sup> paragraph, remove the following text about textile concentration:

511, 512, 540, 552, and 553 for the textiles concentration;

Left column, 1<sup>st</sup> bullet, 3<sup>rd</sup> paragraph, remove the following text about textile concentration:

and 540, 541 or 543, 549, 550, 552, and 553 for the textile science concentration;

### REVISE DUAL MS-MBA – MATERIALS SCIENCE AND ENGINEERING MAJOR

On page 146 of the 2007-2008 *Graduate Catalog* remove existing showcase and replace with:

#### DUAL MS-MBA

<b>August – First Year</b>	<b>Hours Credit</b>
Business Administration 511 (MBA Core I) . . . . .	3
<b>Fall – First Year</b>	
Business Administration 501 (MBA Career Development). . . . .	1
Business Administration 512 (MBA Core II) . . . . .	15
<b>Spring</b>	
Business Administration 513 (MBA Core III) . . . . .	9
MBA Hub Elective. . . . .	3
Engineering Major <sup>1</sup> . . . . .	3
<b>Summer</b>	
Engineering Major <sup>1</sup> / Math. . . . .	6
<b>Fall – Second Year</b>	
Engineering Major <sup>1</sup> . . . . .	6
MBA Innovative & Entrepreneurship Elective . . . . .	6
<b>Spring</b>	
Engineering Major <sup>1</sup> . . . . .	9
<b>Total 61</b>	

<sup>1</sup>Engineering Major courses must be selected to satisfy Materials Science and Engineering major degree requirements.

## DEPARTMENT OF MECHANICAL, AEROSPACE, AND BIOMEDICAL ENGINEERING

### REVISE MAJORS CHART

On page 147 of the 2007-2008 *Graduate Catalog*, right column, beside the major heading of Engineering Science add an \* (asterisk) and then at the bottom add the footnote

\*Engineering science degree may also be used for interdisciplinary fields in all graduate engineering programs.

## REVISE INTRODUCTORY PARAGRAPH

On page 147 of the 2007-2008 *Graduate Catalog*, right column, bottom of page delete the last sentence of the introductory paragraph.

## ADD FIVE-YEAR BS-MS PROGRAM

On page 148 of the 2007-2008 *Graduate Catalog*, immediately above Graduate Credit for Undergraduate Courses, add

**FIVE-YEAR BS-MS PROGRAM**

The department offers a 5 year BS-MS program for qualified students. The primary component of the program is that qualified students may take up to 9 hours of approved graduate courses for their senior undergraduate electives and have them count toward both their bachelor's and master's degrees.

Significant components of the program are:

Students must have an overall GPA of at least 3.4 to be admitted to the program. Conditional admission may be granted after completing 64 hours of required coursework while full admission is granted after completing 96 hours of required coursework with a minimum overall GPA of 3.4 in required coursework.

Students must at least have conditional admission before taking graduate courses for both their bachelor's and master's degrees. All courses taken for graduate credit must be approved by the Chair of the program and the Graduate School.

Admission of students into this program must be approved by the department, the College of Engineering, and the Graduate School.

Students will not be eligible for assistantships until they complete their bachelor's degree.

This program may also be used by students entering our doctoral programs directly after receiving their bachelor's degree.

**NOTE: The Undergraduate Academic Policy Committee and the Graduate Academic Policy Committee have approved a revision to the Seniors Eligible for Graduate Credit Policy - see *Graduate Catalog*, page 22.**

**FROM: Courses taken for graduate credit may not be used for both the baccalaureate and a graduate degree.**

**TO: Courses taken for graduate credit may not be used for both the baccalaureate and a graduate degree program except in the case of approved dual bachelor's/master's programs.**

## REVISE GRADUATE CREDIT FOR UNDERGRADUATE COURSES

On page 148 of the 2007-2008 *Graduate Catalog*, revise to

Students majoring in mechanical engineering, aerospace engineering or biomedical engineering may not normally use more than one 400-level engineering course to meet their advanced degree requirements. Undergraduate courses that are required for the bachelor's degree in mechanical engineering may not be taken for graduate credit by graduate students in mechanical engineering. Undergraduate courses that are required for the bachelor's degree in aerospace engineering may not be taken for graduate credit by graduate students in aerospace engineering. Undergraduate courses that are required for the bachelor's degree in biomedical engineering may not be taken for graduate credit by graduate students in biomedical engineering. For students majoring in engineering science, 400-level graduate courses in engineering may be used to meet requirements at the discretion of the advising committee. However, at least two-thirds of the minimum required hours in a master's degree program must be at or above the 500-level. With the approval of the student's major department, a student whose major is outside the Department of Mechanical, Aerospace, and Biomedical Engineering may take 400-level graduate courses in the department. Such students should consult with instructors regarding prerequisites for undergraduate courses.

## REVISE AEROSPACE ENGINEERING MAJOR, BIOMEDICAL ENGINEERING MAJOR, ENGINEERING SCIENCE MAJOR, MECHANICAL ENGINEERING MAJOR - MS

On page 148 of the 2007-2008 *Graduate Catalog*, delete current introductory paragraph and replace with:

**Requirements**

In aerospace engineering, mechanical engineering, biomedical engineering, and engineering science, 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 coursework.

## REVISE THE SHOWCASES

On page 148 of the 2007-2008 *Graduate Catalog*, replace the current showcases with the following:

**Aerospace Engineering Major • Biomedical Engineering  
Major • Mechanical Engineering Major • Option I (Thesis)**

	<b>Hours Credit</b>
<sup>1</sup> Coursework total . . . . .	24
Thesis . . . . .	6
	<b>Total 30</b>

<sup>1</sup>Courses in program (500-level or above) – 12 hours minimum. Mathematics (400-level or above) – 6 hours minimum.

**Aerospace Engineering Major • Biomedical Engineering  
Major • Mechanical Engineering Major • Option II (Non-Thesis)**

	<b>Hours Credit</b>
<sup>1</sup> Coursework total . . . . .	30
	<b>Total 30</b>

<sup>1</sup> Courses in program (500-level or above) – 18 hours minimum. Mathematics (400-level or above) – 6 hours minimum. 590 Selected Engineering Problems – 6 hours maximum.

**Engineering Science Major • Option I (Thesis)**

	<b>Hours Credit</b>
<sup>1</sup> Coursework total . . . . .	24
Thesis . . . . .	6
	<b>Total 30</b>

<sup>1</sup>Engineering courses – 12 hours minimum (major concentration may include, but is not restricted to, courses offered by the department). Mathematics (400-level or above) – 6 hours minimum. Related courses – 6 hours maximum (may include additional courses in mathematics, computer science, or the physical and life sciences).

**Engineering Science Major • Option II (Non-Thesis)**

	<b>Hours Credit</b>
<sup>1</sup> Coursework total . . . . .	30
	<b>Total 30</b>

<sup>1</sup>Engineering courses – 15 hours minimum (major concentration may include, but is not restricted to, courses offered by the department). Mathematics (400-level or above) – 6 hours minimum. Related courses– 9 hours maximum (may include additional courses in mathematics, computer science, or the physical and life sciences). 590 Selected Engineering Problems – 6 hours maximum.

REVISE DUAL MS-MBA – AEROSPACE ENGINEERING MAJOR, BIOMEDICAL ENGINEERING MAJOR, MECHANICAL ENGINEERING MAJOR, AND ENGINEERING SCIENCE MAJOR

On page 149 of the 2007-2008 *Graduate Catalog*, replace the current showcases with the following:

**DUAL MS-MBA**

Aerospace Engineering Major • Biomedical Engineering  
Major • Mechanical Engineering Major • Engineering Science Major

	<b>Hours Credit</b>
<b>August – First Year</b>	
Business Administration 511 (MBA Core I) . . . . .	3
<b>Fall – First Year</b>	
Business Administration 501 (MBA Career Development). . . . .	1
Business Administration 512 (MBA Core II) . . . . .	15
<b>Spring</b>	
Business Administration 513 (MBA Core III) . . . . .	9
MBA Hub Elective. . . . .	3
<sup>1</sup> Engineering Major. . . . .	3
<b>Summer</b>	
<sup>1</sup> Engineering Major/Math. . . . .	6
<b>Fall – Second Year</b>	
<sup>1</sup> Engineering Major . . . . .	6
MBA Innovative & Entrepreneurship Elective . . . . .	6
<b>Spring</b>	
<sup>1</sup> Engineering Major/Math . . . . .	9
	<b>Total 61</b>

<sup>1</sup>MS requirements: 12 hours minimum in major and 6 hours minimum math (400 level or above).

Dual degree candidates enrolled in engineering science are required to take 18 hours of graduate-level engineering courses. This program requires a coursework plan, approved by the Dual Program Committee Chair, including a concentration.

## DEPARTMENT OF NUCLEAR ENGINEERING

### REVISE REQUIREMENTS - NUCLEAR ENGINEERING MAJOR - MS

Page 151, of the 2007-2008 *Graduate Catalog*, left column, 1<sup>st</sup> bullet revise to

A major consisting of 12 hours of graduate courses in nuclear engineering which must include at least two of the following courses – 511, 521, 552, 571, 581.

### REVISE REQUIREMENTS

On page 151, 2007-2008 *Graduate Catalog*, left column, 4<sup>th</sup> bullet, revise Options 3 and 4 to:

Option 3 – one engineering practice project (3 hours of 598) plus 3 hours of additional nuclear engineering coursework.  
Option 4 – six hours of additional nuclear engineering course work and a comprehensive written exam on all coursework prepared by the student's graduate committee (i.e., no thesis or engineering practice project).

### REVISE TEXT UNDER MS REQUIREMENTS

Page 151, 2007-2008 *Graduate Catalog*, left column, delete the 1<sup>st</sup> and 2<sup>nd</sup> paragraph under the 4<sup>th</sup> bullet and replace with:

The determination of which option a student may undertake is made by the student's graduate committee and is based on the student's personal interests, academic background, and work experience, as well as the nature of projects currently available in the department. A thesis project requires the student to conduct independent, in-depth research. An engineering practice project is similar to a thesis project but smaller in scope and can be research, design, product development, special operations, or a critical review of published literature in a specific technical area. The student must submit a brief written proposal for each project undertaken, either thesis or engineering practice, which must be approved by the student's graduate committee. The final report for an engineering practice project is normally prepared in thesis format (i.e., according to the Graduate School, Guide to the Preparation of Theses and Dissertations); however, another formal report format may be used if approved by the student's graduate committee. The student must also register for the appropriate number of hours of either 500 or 598, as specified by the student's major professor, during each semester that work is performed on a thesis or engineering practice project. Finally, the student must pass an oral examination on all work presented for the degree (all coursework and all projects).

### REVISE NUCLEAR ENGINEERING MAJOR – DUAL MS-MBA

On page 152 of the 2007-2008 *Graduate Catalog*, top of page, delete current showcase and replace with:

#### DUAL MS-MBA

August – First Year	Hours Credit
Business Administration 511 (MBA Core I) . . . . .	3
<b>Fall – First Year</b>	
Business Administration 501 (MBA Career Development). . . . .	1
Business Administration 512 (MBA Core II) . . . . .	15
<b>Spring</b>	
Business Administration 513 (MBA Core III) . . . . .	9
MBA Hub Elective. . . . .	3
Engineering Major <sup>1</sup> . . . . .	3
<b>Summer</b>	
Engineering Major <sup>1</sup> / Math. . . . .	6
<b>Fall – Second Year</b>	
Engineering Major <sup>1</sup> . . . . .	6
MBA Innovative and Entrepreneurship Elective . . . . .	6
<b>Spring</b>	
Engineering Major <sup>1</sup> . . . . .	9
<b>Total</b>	<b>61</b>

<sup>1</sup>Engineering Major courses must be selected to satisfy Nuclear Engineering major degree requirements.

## REVISE REQUIREMENTS – NUCLEAR ENGINEERING MAJOR - PHD

Page 152, 2007-2008 *Graduate Catalog* left column, bottom of page, revise 3<sup>rd</sup> bullet to

A minimum of 30 hours in nuclear engineering courses numbered 500 and above (or the equivalent), with at least 6 hours of 600-level courses. These are exclusive of thesis or dissertation credit. Three of the 6 hours of 600-level courses can be from a department other than nuclear engineering, provided the selection supports the student's research area.

**COLLEGE OF NURSING****All changes effective Fall 2008****I. COURSE CHANGES**

## REVISE TITLE AND DESCRIPTION

**518 Advanced Pathophysiology: Obstetrical and Pediatric Pathophysiology with Anesthesia Implications (2)**

Review of anatomy and physiology with focus on the integration of pathophysiology for obstetrical and pediatric patients requiring anesthetic care.

## REVISE DESCRIPTION

**566 Educational Principles and Strategies (3)** Exploration and analyses of selected education, curriculum; teaching – learning, measurement, and evaluation principles and theories as applied to instruction of collegiate nursing students, staff development, and patient education.

## REVISE DESCRIPTION, (RE) PREREQUISITES, AND (DE) COREQUISITES AND ADD (DE) PREREQUISITES

**561 Mental Health Nursing II (7)** Advanced practice nursing in community setting for families and groups with actual and potential mental health problems.

(RE) Prerequisite(s): 504

(DE) Prerequisite(s): 505 and 515.

(DE) Prerequisite(s) or (DE) Corequisite(s): 507 and 510.

## REVISE TO ADD (DE) PREREQUISITES AND COMMENTS AND DROP RECOMMENDED BACKGROUND

**519 Psychopharmacology in Advanced Practice (3)**

(DE) Prerequisite(s): 505.

Comment(s): Prior knowledge may satisfy prerequisite with consent of instructor.

## REVISE (DE) COREQUISITE

**582 Scholarly Inquiry for Advanced Practice Nursing (3)**

(DE) Prerequisite or (DE) Corequisite: 501.

## REVISE TO ADD COMMENTS

**512 Issues in Advanced Practice Nursing (1)**

Comment(s): Required for all MSN students, except those in Nurse Anesthesia.

**513 Advanced Practice Role Seminar (1)**

Comment(s): Required for masters-entry students.

**II. PROGRAM CHANGES**

## REVISE NURSING MAJOR - MSN

On page 157 of the 2007-08 *Graduate Catalog*, revise second paragraph, second sentence, to add “and homeland security” as follows:

The program ... mental health nursing, nurse anesthesia, and homeland security, as well as....

## REVISE ADMISSION – NURSING MAJOR - MSN

On page 158 of the 2007-08 *Graduate Catalog*, left column, Admission heading, revise 4<sup>th</sup> bullet to

- Applicants for nurse anesthesia, homeland security and masters-entry students require an interview.

On page 158 of the 2007-08 *Graduate Catalog*, delete last bullet and replace with the following:

- Application and admission dates vary. BSN graduates and RN students apply by February 1 for admission for the following fall term. Post-master's applications must be received by October 1 for the following spring admission date. Masters-entry students apply by October 1 for the following summer admission date.

#### REVISE NURSING MAJOR, PROGRAM REQUIREMENTS - MSN

On page 158 of the 2007-08 *Graduate Catalog*, right column, middle of page, under the heading "Required for nurse anesthesia students" revise course 518 to show change in title.

518 Advanced Pathophysiology: Obstetrical and Pediatric Pathophysiology with Anesthesia Implications . . . . 2

On page 159 of the 2007-08 *Graduate Catalog*, left column, revise first entry

550-551-552-564-567-568-569 Nursing of Women and Children: Neonatal Health .....23

On page 159 of the 2007-08 *Graduate Catalog*, left column, revise under heading Additional Course Requirements to add

Issues in Advanced Practice (all concentrations except nurse anesthesia).....1  
Advanced Practice Role Seminar (for masters-entry students).....1

On page 159 of the 2007-08 *Graduate Catalog*, under section that begins "students who enter the program as non-RNs", revise to

Delete 311 Foundations of Professional Nursing Practice .....5

Add 310 Essentials of Nursing Practice.....3

Delete 341 Transcultural Nursing .....2

Add 342 Transcultural Issues .....2

Revise 432 Health Promotion and Maintenance Strategies in the Community.....3

#### REVISE BACHELOR OF SCIENCE IN NURSING COURSES

On page 159 of the 2007-08 *Graduate Catalog*, right column, bottom of page, revise 3<sup>rd</sup> bullet to read

- Proficiency credit can also be obtained in courses marked with an asterisk(\*) in the following section.

#### REVISE NURSING MAJOR - PHD

On page 160, of the 2007-08 *Graduate Catalog*, left column, revise introductory paragraph by deleting the second and third sentences and then move the second paragraph up to the first paragraph.

#### REVISE GRADUATE CERTIFICATES

On page 161, of the 2007-08 *Graduate Catalog*, left column, 2<sup>nd</sup> paragraph, revise the 3<sup>rd</sup> sentence to

Most students complete 16-20 hours of course credit with the exception of those pursuing certificates in homeland security, nurse anesthesia, or women and children: neonatal, where additional hours are required.

On page 161, left column, Adult Health Nursing bullet, delete current text and replace with

Course requirements are 529, 530, and 531, or for those pursuing gerontology, course requirements are 529, 538, and 539, plus additional hours as determined by the college.

On page 161, left column, Homeland Security Nursing bullet, delete current text and replace with

Course requirements are 532, 533, 535, 536, 537, 592, epidemiology, one related elective, plus additional hours as determined by the college.

On page 161, left column, Homeland Security Studies bullet, delete current text and replace with

The interdisciplinary graduate certificate in homeland security studies is available to those who seek to gain specialized knowledge and skills related to the prevention and management of catastrophic incidents or large scale public health

emergencies that result in mass casualties, whether the cause is naturally occurring, accidental, or terrorism. Admission to the certificate program is selective and requires either admission to the University of Tennessee graduate degree seeking program or an earned master's degree in any relevant field, as well as relevant work experience. A degree in nursing is not required. The certificate program is composed of 24 hours: Nursing 532 (3), Nursing 533 (5), Nursing 534 (5), Nursing 537 (3), Nursing 592 (2), graduate-level epidemiology (3 hours), and an approved elective (3 hours).

On page 161, left column, Mental Health Nursing bullet, delete current text and replace with

Course requirements are 519, 560, and 561, plus additional hours determined by the college.

On page 161, right column, Nursing of Women and Children, delete current text and replace with

Course requirements for Women and Children: Pediatrics are 550, 551, 527, 528, 562, 563, plus additional hours as determined by the college; for Women and Children: Women's Health are 550, 551, 553, 554, 555, 556, plus additional hours as determined by the college; for Women and Children: Neonatal are 550, 551, 552, 564, 567, 568, 569, plus additional hours as determined by the college.



## COLLEGE OF VETERINARY MEDICINE

All changes effective Fall 2008

### **I. COURSE CHANGES**

DROP

**834 Hematopoietic System (2)**

ADD

**888 Clinical Pathology (3)** Pathophysiology and diagnosis of hematologic and clinical biochemical disorders in domestic animals; interpretation of laboratory test results using illustrative clinical cases.

### **II. PROGRAM CHANGES**

REVISE REQUIREMENTS

Change last sentence, first column – page 168 – Graduate Catalog to:

The curriculum requires successful completion of 165 credit hours.

Formerly: The curriculum requires successful completion of 164 credit hours.

ATTACHMENT 3  
GRADUATE DEANS' GROUP  
THURSDAY, JANUARY 10, 2008, 2:00–3:15 P.M.  
PAYROLL CONFERENCE ROOM, ANDY HOLT TOWER

Attending:

Mary Albrecht (Chair), Bruce Bomar, William Dunne, Sarah Gardial, Thomas George, Jan Lee, Sally McMillan, Buddy Moore, Matthew Murray, Masood Parang, Rita Smith, Pia Wood, Carolyn Hodges, Mohanan M. K., Kay Reed, Richard Tucker.

The meeting was called to order at 2:00 p.m. by Mary Albrecht, Chair.

1. Graduate Council Bylaws

Matt Murray, Graduate Council Chair, presented the following:

- Thanks were given to William Dunne, Stefanie Ohnesorg, Sybil Marshall, Nicholas Cook, and Kay Reed for serving on the committee to review the bylaws.
- The draft of the new Graduate Council Bylaws contains formation of an executive committee which would include the Chair, Vice Chair, Past Chair and the chairs of all standing committees.
- Matt Murray will take the draft to the Faculty Senate Executive Committee for comment.

A concern regarding the credential approval process was raised. Matt Murray suggested that the issue of approving faculty to direct dissertations be put on the agenda for another meeting. The credentials committee welcomes feedback from the Graduate Deans' Group.

2. NRC Doctoral Survey Update

Linda Painter discussed numerous problems with collecting and reporting the data for the NRC report (Attachment 1).

3. Data Collection

Richard Tucker, Assistant Vice Provost and Director of Institutional Research and Assessment was introduced. Richard Tucker shared some data collection procedures used at Northwestern University that could be implemented at UT.

- A central depository for data which will be uniform individual level database. It will allow ways to capture milestones and set benchmarks.
- Colleges to work with departments to acquire quantitative and qualitative statistics of peer institutions to create benchmarks.

GRADUATE DEANS' GROUP  
THURSDAY, JANUARY 10, 2008, 2:00–3:15 P.M.  
PAYROLL CONFERENCE ROOM, ANDY HOLT TOWER

- Advanced statistics of the data can be analyzed.
- Databases showing additional information such as professional activity, external awards and incentives, and academic placement, etc. can be created.
- Exit interview surveys, such as the one developed by CGS, will be conducted. Other surveys should be instituted, such as graduate student satisfaction surveys, admitted student choice surveys, and non-matriculating student surveys (why students chose not to attend UTK), etc.
- Information on postdocs can be collected.

4. Joint Degree Policy Proposal

Masood Parang presented the joint degree policy proposal to be presented to the Graduate Council for inclusion in the Graduate Catalog. The purpose of the policy is to attract more doctoral students, recruit top graduate students, and to cut expenses by sharing the cost with other universities.

Group members raised several questions about the limitations of the proposed policy and its focus on research at UTK.

5. Strategic Planning Update

Carolyn Hodges gave an update on strategic planning. The committee should complete its task for March. More information is on the Provost's website.

The meeting adjourned at 4:00 p.m.

Respectfully Submitted,

Gay Henegar  
Secretary to Graduate Deans' Group

## ATTACHMENT 4

**DRAFT****BYLAWS OF THE GRADUATE COUNCIL OF THE  
UNIVERSITY OF TENNESSEE****Article I****Graduate Council Mission Statement**

The mission of the Graduate Council is to promote excellence in graduate education at the University of Tennessee, Knoxville. The Graduate Council establishes standards for admission, retention, and graduation; assesses curricular revisions and new proposals for graduate programs; evaluates interdisciplinary, intercollegiate and international programs; approves individuals to direct doctoral dissertations; and considers new initiatives and other matters of policy pertaining to graduate programs. Graduate Council is a special committee of the Faculty Senate that works closely with the Graduate School and a variety of other campus bodies to fulfill its mission.

**Article II****Organizational Structure**

**Part A: Committee Structure** (NOTE: COMMITTEES TO BE HYPERLINKED TO DESCRIPTIONS AND BYLAWS. FOR APPEALS, INCLUDE APPEALS HANDBOOK LINK. OTHER LINKS AS APPROPRIATE)

**Section 1. The Executive Committee**

This standing committee is comprised of the Council Chair, Council Vice Chair, Chairs of all standing committees of Council, and the past Chair of Council. The Council Chair, Vice Chair, and past Chair, along with the chairs of all standing committees, serve as voting members of the Executive Committee. The Dean of the Graduate School and/or the Dean's designee serve as ex-officio nonvoting members of the Executive Committee. The Executive Committee serves in an advisory role to the Chair and Council on matters concerning the mission of Council.

**Section 2. Academic Policy Committee**

This committee serves as a standing committee of the Graduate Council to consider, investigate, and give detailed attention to policies, and forward recommendations for change to the policies contained in the Graduate Catalog that relate to general requirements for admission to graduate programs, enrollment of students, offering of graduate credit, and awarding of graduate degrees at the Knoxville campus of The University of Tennessee.

**Section 3. Credentials Committee**

This standing committee is responsible for procedures that will ensure careful and competent supervision of dissertation research. The goal is to ensure good scholarship, competent management of the process, high academic standards, and completion of dissertations in a timely

manner. To this end the committee will conduct a review of the credentials of those who will be recommended to the Graduate Council for approval to direct doctoral dissertations.

#### **Section 4. Curriculum Committee**

This standing committee makes recommendations to the Graduate Council for the approval or denial of all curricular requests submitted to the Council and to ensure quality, consistency, and accuracy in the advertisement of the University's graduate programs.

#### **Section 5. Appeals Committee**

This standing committee serves the Graduate Council by considering appeals from graduate students concerning a grievance that is unresolved at the department and college level. Appeals may involve the interpretation of and adherence to university, college and department policies and procedures as they apply to graduate education and grievances over grades. This committee does not consider grievances related to race, gender, religion, national origin, age, or disability. Students with such grievances should file a formal complaint with the Office of Equity and Diversity with a copy to the appropriate academic department head.

#### **Section 6. Nominating Committee**

This special committee is appointed by the Executive Committee of Graduate Council and is responsible for identifying and soliciting candidates for Graduate Council Vice Chair, who is Chair-Elect of Council. The committee reports to Graduate Council at the next to the last meeting of the spring semester.

#### **Section 7. Additional Standing/Special Committees**

These committees may be established by the Chair of Graduate Council, in cooperation with the Executive Committee. The Chair of Graduate Council will serve as ex-officio nonvoting member of all additional standing/special committees.

#### **Section 8. Standing Committee Bylaws**

All standing committees will maintain bylaws to govern their operations. These committee bylaws must be approved by Graduate Council and must conform to Council and Faculty Senate bylaws. Committee bylaws may be amended by a two-thirds vote of committee members and subsequent approval by Council.

### **Part B: Graduate Council Linkages**

#### **Section 1. Faculty Senate**

Graduate Council is a special committee of the Faculty Senate and the Chair of Graduate Council serves as ex-officio voting member of the Faculty Senate Executive Committee. Faculty Senate approves implementation of actions taken by Council as stated in Council minutes.

#### **Section 2. Graduate School and Dean of Graduate School**

The Graduate School has responsibility for implementation of policies and procedures adopted by Graduate Council. The Dean of the Graduate School makes recommendations to Council regarding graduate programs and support for graduate students. The Graduate School provides administrative support for the activities of Council and its committees.

**Section 3. Graduate Deans**

The Graduate Deans' Group provides advice to Graduate Council and shares information on Council activities and actions with their respective units.

**Section 4. Graduate Student Senate**

The Graduate Student Senate provides the students' perspective to Graduate Council and its committees through their representatives. The Graduate Student Senate representatives to Council serve as an avenue of communication to the graduate student body on Council activities and actions.

**Section 5. Professional Development Committee**

This committee, chaired by the Dean of the Graduate School, solicits proposals for Professional Development and Research Awards. A subcommittee of Graduate Council, along with the Vice Provost and Dean of the Graduate School and the Associate Vice Chancellor for Research, evaluates proposals and makes awards.

**Section 6. Other Campus Bodies**

To fulfill its mission, Graduate Council interacts regularly with other campus entities, including the Office of the Provost, the Center for International Education, the Office of the University Registrar, the Office of Research and the Undergraduate Council.

**Article III****Membership and Officers****Section 1. Membership**

The membership of council consists of faculty members, two graduate students, and a series of ex-officio (nonvoting) members. Faculty members are elected for three-year terms from colleges and intercollegiate programs. They must regularly teach graduate courses or supervise graduate study and must (1) hold full-time or continuing part-time appointment with the rank of assistant professor or higher, and (2) perform academic duties consisting of at least half-time teaching, research, service or departmental administration. The two graduate students who serve one-year terms are appointed by the Graduate Student Senate. Ex-officio members are the Dean of the Graduate School, the Dean of Libraries, the Assistant Vice Chancellor of the Division of Outreach and Continuing Education, the Director of the Center for International Education, and the Chair of the Research Council or their designees. In addition, the administrative officers with primary responsibility for graduate curriculum in each college or for oversight of all intercollegiate programs serve as ex-officio members of the Graduate Council if they are not college or intercollegiate program representatives.

Faculty members are elected in the spring semester for appointments to commence at the start of the following fall semester. Colleges and intercollegiate programs will notify the Graduate School of the election results for new Council members by no later than April 15. Each college and all intercollegiate programs together will have established guidelines to govern election of Council members. The number of Council members apportioned to each college and to all intercollegiate programs collectively is based on the number of graduate students enrolled in the unit in the previous fall term, using the following table:

Graduate Students	Total Graduate Council Representatives
1-300	1
301-500	2
501-700	3
etc.	

**Section 2. Proxies**

Proxy members of Graduate Council are elected by colleges and intercollegiate programs using the same procedures and timing that are followed to elect regular members of Council. Proxies serve when regular Council members cannot fulfill their responsibilities due to a leave of absence, travel or other scheduling conflicts. The proxy shall have all the privileges and power of the absentee member.

**Section 3. Graduate Council Chair**

The Chair of the Graduate Council is a faculty member from Council who serves for a one-year term, following a one-year term as Vice Chair and Chair Elect. The Chair assumes responsibility for Council activities on August 1<sup>st</sup> and presides over all Council meetings for that academic year. In cooperation with the Dean of the Graduate School, the Chair makes assignments to all standing committees and prepares an agenda for all Council meetings. The Chair may make assignments to ad hoc special committees as needed. The Chair casts the deciding vote on Council matters that result in a tie vote. The Chair serves as ex-officio nonvoting member of all committees of Council. The Chair has Faculty Senate responsibilities as outlined in the Faculty Senate bylaws.

The Faculty Senate bylaws specify that the Chair of Graduate Council will be a faculty member from Graduate Council, elected to a one-year term by voting members of Council. In the year prior to the beginning of the term, the election of Chair is to take place at the last meeting of the spring semester.. Typically, the only candidate for Chair will be the Chair-Elect. A write-in candidate may be added to the ballot by passage of a motion from the floor of Council. A summary of the credentials for the candidate(s) for Chair will be provided to Graduate Council members to aid in their decision. Election of the Chair will occur by secret ballot. Since the Chair serves the entire university and not one constituency, the Chair does not count as part of a school's or college's apportionment of representatives to Council.

**Section 4. Graduate Council Vice Chair and Chair Elect**

Any current faculty member of Council is eligible to be a candidate for Vice Chair. The Nominating Committee of Council will identify and solicit candidates for this post and will report its results during the next to the last meeting of the spring semester. Nominations may also be submitted from the floor at that time. A summary of the credentials for the candidates for Chair-Elect will be provided to Graduate Council members to aid in their decision. Election of the Vice-Chair will occur by secret ballot. The Vice Chair of Graduate Council serves as Chair-

Elect of Council for a term of one year, commencing on August 1<sup>st</sup> after election at the end of the previous Spring Semester. The Vice Chair may participate as an ex officio nonvoting member of all standing and special committees of Council. This experience assists the Vice Chair in preparation for assumption of the Chair position in the following academic year. The Chair-Elect, if elected as will be typical to the position of Chair, will assume the responsibilities of Chair on August 1<sup>st</sup> in the second academic year after being elected to the position of Vice Chair. The Chair-Elect is automatically granted an extension of her or his appointment to Graduate Council for a period of up to three years so as to include membership on Council through one year past her or his term as Chair, serving in the capacity of past Chair. Since the Vice Chair serves the entire university and not one constituency, the Vice Chair does not count as part of a school's or college's apportionment of representatives to Council.

### **Section 5. Graduate Council Past Chair**

Upon completion of a one-year term as Graduate Council Chair, the Chair assumes the position of past Chair. The past Chair provides Council with continuity and experience. Since the Past Chair serves the entire university and not one constituency, the Chair does not count as part of a school's or college's apportionment of representatives to Council.

### **Section 6. Graduate Council Committee Chairs**

Committee chairs are appointed by the Chair of Graduate Council, in consultation with the Dean of the Graduate School. Committee chairs will typically be individuals who have served on Graduate Council and have experience with committee matters.

## **Article IV**

### **Meetings, Decision-making and Reporting**

The calendar for regular meetings of Graduate Council and its committees will be set by the Executive Committee of Graduate Council in consultation with the Dean of the Graduate School. Council and Committee meetings will typically take place on Thursday afternoons. Special meetings of Graduate Council or any of its committees may be called by the Council Chair, the Council Executive Committee, or a majority of the Council membership who hold regular voting rights. Committee Chairs may call special meetings of their committees as needed. Except in the case of emergency, one week's notice will be provided for any called meeting. The schedule of regular meetings for Council and its committees will be published on the Council website and distributed to the membership at the beginning of the Fall semester.

A majority of Graduate Council members or committee members constitutes a quorum. Majority voting will guide all decision-making. Secret ballots will be used for decision-making when requested by a majority of Council or committee members.

Committee chairs and Council Chair will provide reports at each meeting of Graduate Council. The Graduate Council Chair reports to the Faculty Senate which, through approval of Council minutes, implements actions taken by Council.

All meetings of Council and its committees will be governed by the most recent edition of Robert's Rules of Order.



**Article V**

**Amendment of Bylaws**

The Graduate Council may amend and repeal bylaws by a two-thirds majority of voting members, provided that any proposed changes have been reviewed at the prior meeting of Council. All bylaw changes must be ratified by the Faculty Senate.