



University of Tennessee, Knoxville

TRACE: Tennessee Research and Creative Exchange

Graduate Council Minutes

Graduate Council

1-27-2005

Graduate Council Minutes - January 27, 2005

Graduate Council

Follow this and additional works at: https://trace.tennessee.edu/utk_gcminutes

Recommended Citation

Graduate Council, "Graduate Council Minutes - January 27, 2005" (2005). *Graduate Council Minutes*.
https://trace.tennessee.edu/utk_gcminutes/62

This Meeting Minutes is brought to you for free and open access by the Graduate Council at TRACE: Tennessee Research and Creative Exchange. It has been accepted for inclusion in Graduate Council Minutes by an authorized administrator of TRACE: Tennessee Research and Creative Exchange. For more information, please contact trace@utk.edu.

UNIVERSITY OF TENNESSEE

January 27, 2005

Members Present

Vince Anfara, Roberto Benson, Marianne Breinig, Ed Caudill, Charles Collins, Charles Feigerle, Greer Fox, Paul Frymier, Nan Gaylord, Tom George, David Golden, Rosalind Hackett, Mark Harmon, Michael Keene, Barbara Klinkhammer, Jan Lee, Anne Mayhew, Stefanie Ohnesorg, Mary E. Papke, Masood Parang, Dayakar Penumadu, Linda Phillips, Douglas Raber, Lloyd Rinehart, Susan Smith, Handel Wright, Jenny Wright, Michael Zemel.

The Graduate Council meeting was called to order by Stefanie Ohnesorg, Chair, on Thursday, January 27, 2005, at 3:00 p.m. in the 8th Floor Board Room of Andy Holt Tower.

1. Minutes of the Preceding Meeting

The minutes of the November 18, 2004, meeting were approved.

2. Committee ReportsAcademic Policy Committee

Charles Feigerle, Academic Policy Committee Chair, presented the report from the January 13, 2005, meeting.

Time Limits for All Graduate Assistantships - The committee recommended that Council approve a revision to the Graduate Catalog regarding Time Limits for All Graduate Assistantships. Council approved the following revisions for Graduate Catalog:

Delete the current statement on page 43, bottom paragraph, left column. Include the new proposed statement on page 42 after Work Assignments and Related Factors.

The new statement for the Graduate Catalog will read:

Time Limits for All Graduate Assistantships

The maximum number of years that a graduate student can be appointed to a 25% or more assistantship is three years as a master's student, five years as a doctoral student, or eight years in doctoral programs in which students enter with a baccalaureate degree only. Departments or programs may impose stricter limits. Requests for an extension beyond the maximum terms here specified must be made in writing by the academic unit to the Dean of Graduate Studies. Established time limits for completion of graduate programs—six years for a master's program and eight years for a doctoral program—also apply to all graduate assistants.

Deadline for Graduation Application – The committee recommended and Council approved the following revision to the graduation application deadline:

Delete the current policy statement: A student planning to graduate must submit an application for graduation the term he/she intends to graduate.

The new policy statement will read: A student planning to graduate must submit an application for graduation no later than the last day of classes of the term prior to the term he/she intends to graduate.

Discussion of External Reviewers for Doctoral Dissertation Committees – The committee has been discussing possible functions for external (to the university) reviewers on doctoral dissertation committees. Further discussion will continue in the Graduate Deans' Group and Academic Policy Committee.

Credentials Committee

Charles Feigerle presented the report for Sally McMillan, Credentials Committee Chair, from the January 20, 2005, meeting. The committee recommended that Council approve the requests for faculty to be approved to direct doctoral dissertations as listed (Attachment 1).

Council approved the recommendations as presented.

Curriculum Committee

Paul Frymier, Curriculum Committee Chair, presented the report from the January 13, 2005, meeting. Council approved the changes as presented (Attachment 2).

Ad-Hoc Committee on Graduate Student Orientation

Mary Papke reported that the new Graduate Student Orientation Website is in the final stages of completion. This website does replace the fall orientation program for new graduate students facilitated by Graduate Student Services. Orientation for new faculty and graduate teaching assistants will still be held on Thursday, August 18, 2005.

3. Other Business

No other business was reported.

4. Administrative Reports and Announcements

Report of Graduate Dean – Anne Mayhew

- National Research Council (NRC) Rankings Report – Anne Mayhew reported that the NRC has postponed its survey of graduate programs until it has secured funding. Nevertheless, each college/department at UT is to continue moving ahead in its preparation of NRC Survey data collection for all graduate programs, not just doctoral programs. Each UT program will receive basic data for completing the survey from the Office of Institutional Research. The data will be useful in other areas of administration and will prepare the University of Tennessee for the process when the NRC rankings survey begins in the near future.
- SIS Imaging System – The SIS Imaging System continues to go through final stages of development for full operation.
- Hilton A. Smith and Herman E. Spivey Fellowships 2005-2006 – Departments are encouraged to make their nominations for these fellowships. One nomination can be

made by each appropriate department. All nominees not selected will receive a one-time award of \$300.

- English Language Institute (ELI) – Students who have taken the SPEAK Test and scored less than 50 can register for additional training and assistance through the English Language Institute.

Report of Graduate Student Senate (GSS) – Jenny Wright

- Give Hope: An Evening Honoring Tsunami Survivors - This program will be held Monday, January 31, 2005, 7:30 p.m., in the University Center Ballroom. The event is sponsored by the Central Program Council, Asian American Association, Indian American Association, Amnesty International, and SGA.
- 13th Annual GSS Love Your Libraries 5K Run and 1 Mile Fun Walk – This event will be held on Saturday, February 19, 2005. All funds raised will be given to the library system, and the goal is to surpass last year's total of \$7,500 raised. This year, in support of Environmental Semester, a portion of the funds will be earmarked to purchase environmental-related journals.
- Increasing Communication between University of Tennessee's Graduate Students – A new list serve is going to be developed to provide information to all graduate students.
- Web-Mail Quotas Increased – GSS asked the Office of Information Technology (OIT) for assistance with increasing web-mail space for Graduate students. OIT increased megabyte space for all students, faculty, and staff.

Report of Graduate Deans' Group – October 28, 2004 – Mary Papke

- The 'Best Practices in Teaching Program' will begin in 2005-2006. - This year-long program will give graduate teaching assistants/associates opportunities to discuss teaching-related issues with faculty and peers from across the university. A full program of workshops is being developed for Fall 2005 and Spring 2006.
- Appeal Processes for Graduate Students – Discussion and review of the appeals process continues. Mary Papke, Deans from the Graduate Deans' Group, and Handel Wright, Chair of the Appeals Committee, will be involved in this process.

Report from Chair – Stefanie Ohnesorg

Ohnesorg encouraged members to continue utilizing the communication tool of the Blackboard site/list serve for development and discussion of topics of concern to the Graduate Council.

The next Council meeting will occur on March 3, 2005.

With no further business the meeting was adjourned at 4:45 p.m.

Respectfully Submitted,

Tammy L. Barnhart

CREDENTIALS REPORT

INITIAL Approval of Tenure-Track Faculty without Tenure (Probationary) Each Recommended for Approval Until Tenure
--

Bell, Sherry, Assist. Professor	Theory & Practice in Teacher Education
Butler, Marguerite Assist. Professor	Ecology & Evolutionary Biology
Chen, Jui-Chi "Rachel" Assist. Professor	Consumer Services Management
Fordyce, James Assist. Professor	Ecology & Evolutionary Biology
Kim, Youn-Kyung Assoc. Professor	Consumer Services Management
Lee, Youngmi Assist. Professor	Chemistry
Near, Tom Assist. Professor	Ecology & Evolutionary Biology
Sanders, Nathan Assist. Professor	Ecology & Evolutionary Biology

INITIAL Approval of Non-Tenure Track Faculty Recommended for Approval for 5 Years
--

Uberbacher, Edward Adjunct Professor	Life Sciences (Genome Sci. & Tech.)
---	-------------------------------------

COLLEGE OF AGRICULTURAL SCIENCES AND NATURAL RESOURCES

ALL CHANGES EFFECTIVE: FALL 2005

I. Course Changes

DEPARTMENT OF AGRICULTURAL AND EXTENSION EDUCATION

Agricultural And Extension Education (042)

REVISE CREDIT LEVEL (ADD GRADUATE CREDIT)

440 Communication Techniques in Agriculture (3) Elements of effective use of mass media in Agricultural and Extension Education. Effective technical writing and presentation strategies for agricultural audiences. Prerequisite for undergraduate students: English 101 and 102, junior standing. Prerequisite for graduate students: None.

REVISE CREDIT LEVEL (ADD GRADUATE CREDIT) AND REQUEST FOR ELECTRONICALLY-MEDIATED FORMAT

450 Agricultural Leadership Development (3) Identification of styles, and roles of leadership; development of leadership techniques and skills required in working with organizations and youth groups, methods of resolving conflict, of communicating, of guiding and evaluating; ethical considerations for leaders. Prerequisite for undergraduate students: Junior standing. Prerequisite for graduate students: None.

- Total Number of Weeks: 15
- Total Expected Student Time Commitment: 9 hours per week for a total of 135 hours
- Course Designation: Tennessee On-line Course
- Student Site Requirements: Students will do all their coursework through asynchronous audio/video once/week and be required to complete a leadership project in their home community.
- What is the nature and quantity of structured student/instructor interaction? Students will spend approximately 2-3 hours of audio/video lecture each week.
- What is the nature and quantity of structured student/student interaction? 2 hours of scheduled group discussions; 2 hours of student to student interaction on the discussion board per week.

DROP

533 Agricultural Leadership Development (3)

540 Communication Techniques in Agriculture (3)

Reference Chart for Curriculum System Entry
Agricultural and Extension Education (042)

Current Courses	Fall 2005
533 Agricultural Leadership Development (3)	450 Agricultural Leadership Development (3)
540 Communication Techniques in Agriculture (3)	440 Communication Techniques in Agriculture (3)

DEPARTMENT OF AGRICULTURAL ECONOMICS

Agricultural Economics (047)

ADD

520 Research Methods in Agricultural Economics (1) An overview of the logic and process of economic inquiry. Topics covered include the relationship between theory and applied research, problem formulation, definition of research problems, development of research problem statements with goals and objectives, and presentation and interpretation of results. Prereq: Graduate standing or consent of instructor.

670 Advanced Topics in Natural Resource Economics (3) Applications of microeconomic theory to the use, allocation and control of scarce, exhaustible, and renewable natural resources, including soil, water, minerals, forests, and fish, in both static and dynamic contexts. Optimal control theory, dynamic programming, supply of, and demand for, natural resources, social versus private decisions, market and non-market considerations, regulation, uncertainty, property rights, equity considerations, and landscape pattern and change. Prereq: 505 or equivalent, or consent of instructor.

DEPARTMENT OF BIOSYSTEMS ENGINEERING AND ENVIRONMENTAL SCIENCE**Biosystems Engineering Technology (194)**

ADD

534 Production Monitoring and Automation (3) Precision technologies for monitoring and control of agricultural systems. Applications include: yield monitoring, variable rate control and sensing systems for planters, sprayers, soil applied nutrients, water management, crop health, and pest pressure; electronic information transfer; and GPS-based vehicle guidance. 2 hours and 1 lab. Prereq: 326 or GIS experience, graduate standing, or consent of instructor. Students cannot receive credit for both 434 and 534.

Biosystems Engineering (196)

ADD

519 Modeling Techniques and Applications (3) Engineering approach to mathematical modeling of physical phenomena. Systems definitions and boundaries; types and formulation of models and solution techniques; verification and calibration techniques; model applications and case studies. 2 hours and 1 lab. Prereq: Graduate standing in engineering.

619 Mathematical Modeling for Engineers (3) Describing physical and biological settings with mathematical expressions. Applying dimensional analysis, linear and nonlinear ordinary differential equations, partial differential equations, systems of linear equations, linearization, moving boundary problems, and series solutions to solve mathematical expressions. Prereq: 519 and a course in differential equations, or consent of instructor.

ADD AND REQUEST FOR ELECTRONICALLY MEDIATED FORMAT

591 Environmentally-Sensitive Spray Applications (3) Develops the concepts of spray drift causes and corrective actions to lessen the effects of pesticides in the environment. Concepts are based on factors related to dosage transfer and the competing physics of droplet delivery under a variety of atmospheric conditions. Mass balance procedures are emphasized to validate measures of spray drift. Sprayer equipment components and operation factors affecting spray drift are introduced as operator controlled measures to minimize spray drift. The role of pesticide label language is incorporated into course concepts. Best management practices are developed to ensure practical applications of course concepts are emphasized. The student will learn how to implement spray drift reduction practices as well as make objective conclusions about spray drift test data. Prereq: Consent of instructor.

- Total Number of Weeks: 13
- Total Expected Student Time Commitment: 9 hours per week
- Course Designation: Tennessee On-line Course
- Student Site Requirements: On- or Off-Campus asynchronous access to complete 1 module per week required.
- What is the nature and quantity of structured student/instructor interaction? Course lectures are supplied as 1 asynchronous Web module per week through a combination of Blackboard and course-dedicated Web sites. Assignments are based on each module and 1 homework per week is due. Homework performance provides feedback to the instructor to adjust module content and subsequent homework assignments. A final test will be administered through Blackboard with appropriate time limits.
- What is the nature and quantity of structured student/student interaction? Asynchronous discussion board with instructor input.

DROP (COURSE IS BEING DROPPED ON UNDERGRADUATE LEVEL)

441 Life Systems Engineering (3)

DROP

510 Similitude in Design and Research (3)**620 Computer Simulation of Agricultural Systems (3)**

REVISE COURSE DESCRIPTION, CHANGE COREQ TO PREREQ

431 Bioprocess Engineering (3) Development of interdisciplinary bioprocess engineering; basics of biology in an engineering perspective; enzymatic reaction kinetics; metabolism and bioenergetics; cell growth kinetics and product formation; engineering principles applied to bioprocess engineering including mass balance, energy balance, and reaction kinetics; reactor design and systems; introduction to bioseparations; practical aspects of bioprocess engineers and process development. 2 hours and 1 lab. Prereq: 321.

REVISE PREREQUISITE

545 Monitoring Hydrologic Phenomena (3) Prereq: BsE/CE 416/Hydrologic and Water Quality Engineering or equivalent.

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

ADD

505 Mycology (3) Survey of the fungal kingdom and traditional allies in the context of phyla and classes. Systematics, biology, reproduction, structure-function, physiology, and ecology illustrated with fresh and preserved material and cultural techniques in laboratories. 2 hours and 1 lab. Prereq: Biology 111-112 or Biology 130-140. Students cannot receive credit for both 405 and 505.

550 Molecular Epidemiology and Mycology (3) An overview of molecular tools for exploring population biology as well as gene function with an emphasis on tools for emerging and traditional model organisms that have whole genome sequences available. The course will include lectures, assigned reading and discussion, and laboratory demonstrations. The course is open to upper-level undergraduate (junior or senior), master's, and PhD students. Prereq: Consent of instructor.

ADD AND CROSS-LIST PRIMARY COURSE

513 Plant Pathogenic Fungi (2) Morphology, taxonomy, and biology of fungal plant pathogens. 2 hours and 2 labs weekly for 7 weeks. Prereq: 313 or consent of instructor. (*Same as Plant Sciences 513.*)

DROP PRIMARY CROSS-LISTED COURSE

510 Plant Disease Fungi (4) (*Same as Plant Sciences 510.*)

REVISE PRIMARY CROSS-LISTED COURSE TO DROP A SECONDARY COURSE

451 Plant Tissue Culture (3) (*Same as Plant Sciences 451.*)

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

DROP

570 Management and Policy of Forest Resource Organizations (3)

Forestry, Wildlife And Fisheries (398)

ADD

570 Natural Resource Sustainability: Social, Political and Institutional Dimensions (3) Use and management of natural resources in a world of constant change, interdependent systems (environmental, social, economic and political), and inevitable conflicts, utilizing technical as well as social/political advances. Historical and current approaches to natural resource governance, associated and inherent conflicts, changes in institutions and new paradigms of collaboration, adaptive management, social learning and social capacity building. Prereq: Graduate standing. Students who received credit for Forestry 570 may not receive credit for Forestry, Wildlife and Fisheries 570.

Reference Chart for Curriculum System Entry

Current Forestry (396) Courses	Forestry, Wildlife and Fisheries (398) Courses Fall 2005
Forestry 570 Management and Policy of Forest Resource Organizations (3)	Forestry, Wildlife and Fisheries 570 Natural Resource Sustainability: Social, Political and Institutional Dimensions (3)

Wildlife And Fisheries Science (993)

ADD

531 Wildlife Physiology and Nutrition (2) Introduction and overview of endocrine and physiological mechanisms regulating wild animal populations (primarily wild birds and mammals): the importance of wildlife physiology and nutrition in monitoring and managing wildlife. Prereq: Senior or graduate standing in life sciences.

DEPARTMENT OF PLANT SCIENCES**Plant Sciences (791)**

REVISE CREDIT LEVEL (ADD GRADUATE CREDIT)

441 Advanced Turfgrass Management (2) Principles and scientific basis of turfgrass culture; adaptation, ecology, physiology, climatic influences on grass culture; clipping and water management; design. 1-hour lecture and one 1-hour lab. Prereq: 240.

442 Turf Root-zone Construction (2) Construction and management of root-zones for home lawns, golf courses and athletic fields. Prereq: 240.

448 Horticultural Internet Technology (3) Creation and management of information resources for the internet, with a focus on development of visual and oral communications skills through a series of individual and team exercises in writing, graphics and public speaking. Prereq: Communication Studies 210 or 240.

454 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. 1-hour lecture and one 3-hour lab. Prereq: 353 or Biology 240.

457 Weed Management (2) Principles of weed interference, integrated management, herbicide selectivity and behavior, specific recommendations for various crop and non-crop situations. Prereq: Environmental and Soil Sciences 210.

458 Turf Weed Management Lab (1) Laboratory addressing practices and principles presented in 457, from the standpoint of turf. Prereq or coreq: 457. Prereq: Environmental and Soil Sciences 210.

459 Agronomy Weed Management Lab (1) Laboratory addressing practices and principles presented in 457, from the standpoint of agronomy. Prereq or coreq: 457. Prereq: Environmental and Soil Sciences 210.

ADD

561 Statistics for Biological Research (3) Application of statistics to interpretation of biological research. Notation, descriptive statistics, probability, distributions, confidence intervals, t- and chi-square tests, analysis of variance, mean separation procedures, linear regression and correlation. Prereq: Mathematics 125 or 152. Students may not receive credit for both 461 and 561.

ADD AND CROSS-LIST SECONDARY COURSE

513 Plant Pathogenic Fungi (2) (See *Entomology and Plant Pathology* 513.)

DROP

431 Physiology and Ecology in Agroecosystems (3)

440 Advanced Turfgrass Management (4)

453 Principles of Plant Breeding (3)

471 Statistics for Biological Research (3)

DROP SECONDARY CROSS-LISTED COURSE

510 Plant Disease Fungi (4) (Same as *Entomology and Plant Pathology* 510.)

Reference Chart for Curriculum System Entry

Current Plant Sciences (791) Courses	Fall 2005 Courses
440 Advanced Turfgrass Management (4)	441 Advanced Turfgrass Management (2) and 442 Turf Root-zone Construction (2)
471 Statistics for Biological Research (3)	561 Statistics for Biological Research (3) 461 Statistics for Biological Research (3)—on UG Chart

REVISE CREDIT LEVEL (REMOVE GRADUATE CREDIT)

460 Professional Practices in Landscape Construction and Management (2)

REVISE PREREQUISITES

485 Computer Aided Landscape Design (3) Prereq: 280, 380, and Agriculture and Natural Resources 290 or Computer Sciences 100 or equivalent.

494 Professional Horticultural Communications (3) Prereq: Agriculture and Natural Resources 290 or Computer Sciences 100 or equivalent, and senior standing.

532 Environmental Crop Physiology and Ecology (3) Prereq: Plant physiology course.

551 Organismal Plant Genetics (3) Prereq: General genetics and 561 or equivalent.

653 Advanced Plant Breeding Genetics (3) Prereq: 571 and general genetics, or equivalent.

REVISE CREDIT HOURS

410 Nursery Management and Production (2)

REVISE CREDIT HOURS AND PREREQUISITES

427 Management and Administration of Public Horticulture Institutions (2) Prereq: 226

429 Field Study of Public Horticulture Institutions (2) Prereq: 226.

435 Field and Forage Crops (2) Prereq: 335.

437 Public Garden Operations and Management (2) Prereq: 226.

446 Horticultural Therapy (2) Prereq: Senior standing.

REVISE COURSE DESCRIPTION AND PREREQUISITES

434 Fruit and Vegetable Crops (3) Botanical description, geographical distribution, general cultural practices of warm and cool season vegetables, small fruits, and deciduous tree fruits. A Saturday field trip is required. 2 hours lecture and one 2-hour lab. Prereq: 120, Biology 110-120.

II. Program Changes

DEPARTMENT OF AGRICULTURAL ECONOMICS

REVISE REQUIREMENTS FOR MS IN AGRICULTURAL ECONOMICS – AGRIBUSINESS AND AGRICULTURAL ECONOMICS CONCENTRATIONS

- On page 49 of the Graduate Catalog, 2004-2005, REVISE MS in Agricultural Economics

Requirements

The Department of Agricultural Economics offers a program of graduate study leading to the Master of Science. The MS program may be completed under a thesis option with a concentration in agricultural economics. A non-thesis option is available with concentrations in agricultural economics or agribusiness. For specific information, contact the department head.

Agribusiness Concentration

The MS agribusiness concentration is designed to prepare students to succeed in the public or private sectors of agriculture, including product manufacturing and marketing, natural resource management, farm management, and financial analysis. A candidate must complete a minimum of 31 hours of graduate credit in courses approved by the student's master's committee. At least 28 hours must be earned in courses numbered at or above the 500 level. Sixteen hours of agricultural economics, 3 hours of economic theory, 6 hours of quantitative methods, 6 hours of business, statistics, or communications electives, and 6 hours of internship are required. Each student must pass both written and oral comprehensive examinations.

Agricultural Economics Concentration • Thesis Option

The MS thesis option in agricultural economics is designed to prepare students for analytical and research careers in the public and private sectors, 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 28 hours must be earned in courses numbered at or above the 500 level. In this option, 16 hours of agricultural economics, 6 hours of economic theory, 6 hours of quantitative methods, and 6 hours of thesis are required. Each student must pass a final oral examination.

Agricultural Economics Concentration • Non-Thesis Option

The MS non-thesis option in agricultural economics is designed to prepare students for analytical and research careers in the public and private sectors. A candidate must complete a minimum of 36 hours of graduate credit in courses approved by the student's master's committee. At least 33 hours must be earned in courses numbered at or above the 500 level. In this non-thesis option, 30 hours of agricultural economics courses and 6 hours of directed electives are required. Each student must pass both written and oral comprehensive examinations.

ADD CATALOG TEXT

- On page 49 of the 2004-2005 Graduate Catalog, add the following paragraph before the listing of Agricultural Economics graduate courses.

DOCTOR OF PHILOSOPHY**Natural Resources Major**

Students interested in pursuing doctoral studies in the area of natural resource economics and policy may do so under the PhD major in natural resources 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 course work that will meet the requirements for the PhD with a major in natural resources while drawing heavily from the Department of Agricultural Economics and the Department of Economics.

DEPARTMENT OF BIOSYSTEMS ENGINEERING AND ENVIRONMENTAL SCIENCE**REVISE MASTER OF SCIENCE - BIOSYSTEMS ENGINEERING MAJOR REQUIREMENTS**

- On page 53, column 1 of the 2004-2005 Graduate Catalog, REVISE the first line of the requirements table for the Biosystems Engineering Major

Biosystems Engineering 503 (3 times 1 hour), 519, 543, and other major subject coursework 12

REVISE DOCTOR OF PHILOSOPHY - BIOSYSTEMS ENGINEERING MAJOR REQUIREMENTS

- On page 55, column 2 of the 2004-2005 Graduate Catalog, REVISE the first line of the requirements table for the Biosystems Engineering Major:

Biosystems Engineering 619 and other major subject courses 18

REVISE MASTER OF SCIENCE - BIOSYSTEMS ENGINEERING TECHNOLOGY MAJOR - THESIS OPTION REQUIREMENTS

- On page 53, column 2 of the 2004-2005 Graduate Catalog, REVISE the first line of the requirements table for the Biosystems Engineering Technology Major Thesis Option

Biosystems Engineering Technology 503 (3 times 1 hour), 506, and other major subject coursework 12

REVISE REQUIREMENTS FOR THE MASTER OF SCIENCE - BIOSYSTEMS ENGINEERING TECHNOLOGY MAJOR
- NON-THESIS OPTION

- On page 53, column 2 of the 2004-2005 Graduate Catalog, REVISE the first line of the requirements table for the Biosystems Engineering Technology Major Non-Thesis Option

Biosystems Engineering Technology 503 (3 times 1 hour), 506, and other major subject coursework 12

DEPARTMENT OF PLANT SCIENCES

REVISE COURSE REQUIREMENTS FOR THE MASTER OF SCIENCE, PLANT SCIENCES MAJOR, TO REFLECT
COURSES NOW EQUIVALENT TO PREVIOUS BOTANY COURSES

- On page 65 of the 2004-2005 Graduate Catalog, Requirements section, second bullet, revise:

Six of these hours may be satisfied by Biochemistry and Cellular and Molecular Biology 404, 521, 522, Animal Science 571, Environmental and Soil Sciences 434, 444, 516, Ecology and Evolutionary Biology 414, 431, 520, 560, Information Sciences 560, Art 481, or Geography 439.

COLLEGE OF ARCHITECTURE AND DESIGN

SCHOOL OF ARCHITECTURE

I. Course Changes

Architecture (133)

ADD

545 Principles of Environmental Control I (3) Introduction to heating, ventilating, air conditioning, solar energy, plumbing and fire-protection systems. Prereq: 180 and Master of Architecture admission.

Effective: Fall 2005

COLLEGE OF ARTS AND SCIENCES**ALL CHANGES EFFECTIVE: FALL 2005****I. Course Changes****DEPARTMENT OF ANTHROPOLOGY****Anthropology (122)**

REVISE TITLES OF SECONDARY CROSS-LISTED COURSES
(TITLES OF PRIMARY COURSES ARE BEING REVISED)

481 Museum Studies I: Museums, Purpose and Function (3) *(See Art 481.)*

482 Museum Studies II: Exhibition Planning and Installation (3) *(See Art 482.)*

484 Museum Studies III: Field Projects (1-12) *(See Art 484.)*

SCHOOL OF ART**Art (140)**

REVISE TITLES OF PRIMARY CROSS-LISTED COURSES

481 Museum Studies I: Museums, Purpose and Function (3) *(Same as Anthropology 481.)*

482 Museum Studies II: Exhibition, Planning and Installation (3) *(Same as Anthropology 482.)*

484 Museum Studies III: Field Projects (1-12) *(Same as Anthropology 484.)*

Art Ceramics (135)

REVISE CREDIT HOURS

421 Ceramics: Advanced Handbuilding (6)

422 Ceramics: Advanced Throwing (6)

Art History (139)

ADD

464 Oceanic Art (3) Concentrated study of selected sculpture, textiles, architecture and other traditional art forms of Polynesia, Micronesia and Melanesia. Objects are discussed on the basis of style, style relationship, iconography and the uses to which they were put in their traditional religious, political and social contexts. Writing-emphasis course.

REVISE CROSS-LISTING

431 Medieval Art of the West, 800-1400 (3) Western European art of the "Dark Ages," Romanesque, and Gothic periods. Writing-emphasis course. *(Same as Judaic Studies 431; Medieval Studies 431.)*

441 Northern European Painting, 1350-1600 (3) From courtly art of late Middle Ages to Northern Renaissance. Jan van Eyck, Roger van der Weyden, and Durer; early printmakers. Writing-emphasis course. *(Same as Medieval Studies 441.)*

451 The Art of Italy, 1250-1450 (3) Development of exploration of naturalism. Revival of antiquity and development of theories of perspective in the Early Renaissance. Including Duccio, Giotto, Masaccio, Donatello, Botticelli. Writing-emphasis course. *(Same as Medieval Studies 451.)*

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

ADD

516 Language Sample Analysis (3) Methods of characterizing and describing language behaviors. Prereq: 320 or equivalent.

527 Language, Culture, and Communication Disorders (3) Multicultural issues across the lifespan; theoretical rationales for speech and language development and use, assessment and treatment practices. Prereq: Graduate standing.

664 Advanced Seminar in Amplification (3) Synthesis of information on amplification technology, amplification for adults with hearing impairment, and case studies. Prereq: 543, 544, 584, 594, or equivalents or consent of instructor.

REVISE TITLE

494 Introduction to Aural Habilitation/Rehabilitation of the Hearing-Impaired

594 Aural Habilitation/Rehabilitation of the Hearing-Impaired

604 Molecular Genetics and Pharmacology of Hearing

662 Advanced Seminar in Audiologic Assessment

663 Advanced Seminar in Aural Habilitation/Rehabilitation

REVISE COURSE DESCRIPTION

461 Introduction to Language Pathology in Children (3) Etiology, diagnosis, and treatment of language impairments in children. Prereq: 320 or consent of instructor.

602 Psychoacoustics (3) Auditory perception and reception of acoustic stimuli. Prereq: 507 or equivalent or consent of instructor.

605 Speech Perception and Hearing Impairment (3) Study of perception of speech stimuli, with particular emphases on the effects of hearing impairment on perception.

DEPARTMENT OF BIOCHEMISTRY AND CELLULAR AND MOLECULAR BIOLOGY

Biochemistry And Cellular And Molecular Biology (188)

ADD

404 Plant Molecular Biology (4) Introduction to current research approaches and methodologies in plant developmental biology and molecular genetics. Laboratory and lecture. Prereq: Biology 140 and 240 or equivalent.

522-523 Advanced Plant Physiology I, II (3,3) 522--Plant biochemistry and metabolism: respiration, photosynthesis, carbon partitioning, and biosynthesis of specialized plant products: terpenoids, alkaloids, phenolics and plant growth regulators. 523--Growth and differentiation of plants at molecular, cellular and organismal levels. Regulation of development; macromolecular interpretation of differentiation, dormancy, germination, flowering and senescence. Prereq: 401 and 1 semester of introductory plant physiology or cell biology.

DROP

410 Cellular and Comparative Biochemistry (4)

REVISE COURSE DESCRIPTION, CREDIT HOURS, REPETITION

515 Experimental Techniques I (2-4) Introduction to modern experimental methodology and instrumentation in biochemistry, molecular biology and cell biology, including cell culture; spectrophotometry; microscopy; nucleic acid purification and analysis; protein assays; enzyme purification; electrophysiology; computer analysis of nucleic acid and protein sequences. Team-taught lecture/demonstration format. Primarily for departmental graduate students. May be repeated. Maximum 6 hours.

REVISE CREDIT HOURS, GRADING, AND REPETITION

516 Experimental Techniques II (2-4) Laboratory rotations. Students work in laboratory of faculty member on clearly defined project. Written proposal and oral report. Primarily for departmental graduate students. Prereq: 515. May be repeated. Maximum 8 hours.

REVISE TO REMOVE CROSS-LISTING FROM PRIMARY COURSE

562 Introduction to Electron Microscopy - Transmission Electron Microscope (4) Practical application to techniques for preparation of biological samples for viewing in transmission electron microscopy. Use of microscope and ancillary equipment, darkroom techniques, preparation of materials for publication and special project. Two 3-hour labs. Admission limited to departmentally approved graduate students.

DEPARTMENT OF BOTANY

Botany (198)

DROP ACADEMIC DISCIPLINE AND ALL BOTANY COURSES

401 Field Studies in Botany (1-3)

404 Plant Molecular Biology (4)

412 Plant Anatomy (3)

419 Science as Method (3)

Secondary course.

Primary course: Ecology and Evolutionary Biology 419.

431 Plant Ecology (4)

Primary course.

Secondary course: Ecology and Evolutionary Biology 431.

451 Plant Tissue Culture (3)

Secondary course.

Primary course: Entomology and Plant Pathology 451.

500 Thesis (1-15)

502 Registration for Use of Facilities (1-15)

503 Non-Thesis Research (2)

510 Introduction to Electron Microscopy – Transmission Electron Microscopy (4) Secondary course.

Primary course: Biochemistry and Cellular and Molecular Biology 562.

521-522 Advanced Plant Physiology I, II (3,3)

530 Advanced Taxonomy of Flowering Plant (3)

531-532 Special Problems in Botany (1-4, 1-4)

544 Seminar in Botany (1)

599 Advanced Evolutionary Ecology (3) Primary course.

Secondary course: Ecology and Evolutionary Biology 599.

600 Doctoral Research and Dissertation (2-15)

606-607 Advanced Topics in Botanical Sciences (1-3, 1-3)

662 Seminar in the History of Botany (2)

Reference Chart for Curriculum System Entry

Current Botany (198) Courses	Fall 2005 Courses
401	
404	Biochemistry & Cellular and Molecular Biology 404
412	Ecology and Evolutionary Biology 414
419	
431 (Same as EEB 431)	Ecology and Evolutionary Biology 433
451	
500	
502	
503	
507	
510	
521	Biochemistry & Cellular and Molecular Biology 522
522	Biochemistry & Cellular and Molecular Biology 532
530	Ecology and Evolutionary Biology 530
531	
532	
544	
585	
599 (Same as EEB 599)	Ecology and Evolutionary Biology 595
600	
606-607	
662	Ecology and Evolutionary Biology 662

DEPARTMENT OF COMPUTER SCIENCE**Computer Science (266)**

ADD

592 Off-campus Study (1-6) See College of Arts and Sciences. May be repeated. Maximum 6 hours.

REVISE COURSE DESCRIPTION AND PREREQUISITE

580 Foundations (3) Foundations of computer science, including Turing machines, computability and computational complexity. Prereq: Automata theory.

REVISE TITLE, DESCRIPTION AND PREREQUISITE

581 Algorithms (3) Analysis of algorithms and relevance of analysis to design of efficient computer algorithms. Sorting, searching, graph algorithms, pattern matching, dynamic programming, efficient approximation algorithms. Prereq: Fundamental algorithms.

DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY**Ecology And Evolutionary Biology (278)**

ADD

410 Plant Evolutionary Morphology (4) Morphology, development, natural history, and evolution of fungi, cyanobacteria, non-vascular plants (algae and bryophytes), and vascular plants (ferns, fern allies, gymnosperms, and flowering plants). Prereq: Biology 102 or 110 or 130 or equivalent.

414 Plant Anatomy (3) Cells, tissues and organs, their development in vegetative and reproductive structures of vascular plants - emphasis on seed plants. Prereq: Biology 111-112 or Biology 130-140 or equivalent.

433 Plant Ecology (3) Interactions between individuals, species, communities and their environments. Circulation of energy and matter in ecosystems. Weekly field trips or laboratory periods, and at least two weekend field trips. Prereq: 330 or equivalent.

465 Evolutionary and Functional Vertebrate Morphology (4) A detailed study of the structure and function of the vertebrates. Analysis of evolutionary patterns of vertebrates using the comparative method and data from anatomy, developmental biology and functional morphology within a phylogenetic context. Laboratory requires intensive dissection to learn vertebrate anatomy, evolutionary trends and specializations. 2 hours and 2 labs. Prereq: Biology 250 or consent of instructor, Physics 221 recommended.

530 Advanced Taxonomy of Flowering Plants (3) Evolution and classification of families of angiosperms, local flora. 2 hours lecture and 1 lab. Prereq: 330 or equivalent.

595 Advanced Evolutionary Ecology (3) Advanced concepts in evolutionary and ecological genetics. Biogeography, climate, population genetics, evolution and natural selection, population growth and regulation, competition, niche, experimental ecology, predation, phylogenetics in ecology, biodiversity and conservation. Prereq: General biology and general ecology; one or more courses on organismal biology (ecology, evolution) at the upper-undergraduate level or consent of instructor. Students cannot receive credit for both 495 and 595.

662 Seminar in the History of Botany (2) History of botanical exploration and advances from early civilized to modern periods. May be repeated. Maximum 4 hours.

DROP SECONDARY COURSES

431 Plant Ecology (4) *(Same as Botany 431.)*

552 Development Planning in the Third World (3) *(Same as Planning 552.)*

555 Environmental Planning (3) *(Same as Planning 555.)*

599 Advanced Evolutionary Ecology (3) *(Same as Botany 599.)*

REVISE CROSS-LISTING OF PRIMARY COURSE TO REMOVE A SECONDARY CROSS-LISTING

419 Science as Method (3) Dynamic process of scientific discovery. Comparisons of science, nonscience, pseudoscience, successful and unsuccessful science. Ethics of scientific research, philosophical aspects of scientific enterprise, and implications for teaching and writing about science. Prereq: Introductory science or philosophy course, or consent of instructor. *(Same as Philosophy 419.)*

DEPARTMENT OF ENGLISH**English (339)**

ADD PRIMARY COURSE AND CROSS-LIST

575 Issues in Second/Foreign Language Rhetoric and Composition (3) Examination of cross-linguistic and cross-cultural issues in the development of academic writing proficiency in a second/foreign language. (*Same as Linguistics 575.*)

DROP PRIMARY CROSS-LISTED COURSE

475 Teaching English as a Second or Foreign Language II (3) (*Same as Linguistics 475.*)

REVISE PRIMARY COURSE TO DROP A SECONDARY CROSS-LISTING

471 Sociolinguistics (3) (*Same as Linguistics 471.*)

DEPARTMENT OF GEOGRAPHY**Geography (415)**

ADD

414 Spatial Databases and Data Management (3) Types, sources, acquisition, and documentation of spatial data. Spatial database management methods and strategies for data sharing. 2 hours lecture and 2 hours lab. Prereq: Geography 411 or consent of instructor.

454 Terrain Analysis (3) Analysis of landscape history from digital elevation datasets and traditional topographic maps. Basement materials and structures; and erosional and depositional evidence, including fluvial, glacial, aeolian, and shoreline features, of past climatic and biological regimes. Prereq: 131-132 or Geology 101-102 /107-108.

545 Topics in Population Geography (3) Human population dynamics and migration, spatial variation in population composition and housing. Demographic analysis techniques.

611 Seminar in Geographic Information Science (3) Prereq: 517, 518 or consent of instructor. May be repeated. Maximum 6 hours.

ADD PRIMARY COURSE AND CROSS-LIST

442 Urban Social Geography (3) Geographical study of urban culture; social production of neighborhoods; social and behavioral aspects of territoriality, residential mobility, segregation, and the rise of post-industrial and global cities (*Same as Urban Studies 442.*)

REVISE TITLE, DESCRIPTION, AND PREREQUISITE

411 Introduction to Geographic Information Science (3) Concepts and methods of spatial analysis and their application using geographic information systems software and techniques. Emphasizes both theoretical and applied aspects of GIS. 2 hours lecture and 2 hours lab. Prereq: 310 or consent of instructor.

REVISE DESCRIPTION AND CREDIT HOURS

413 Remote Sensing: Types and Applications (4) Principles and uses of remote sensing imagery, digital data, and spectral data: geographic interpretation and mapping techniques. 3 hours lecture, 2 hours lab. Prereq: 310 or consent of instructor.

INTERDISCIPLINARY PROGRAMS**Linguistics (623)**

ADD AND CROSS-LIST SECONDARY COURSE

575 Issues in Second/Foreign Language Rhetoric and Composition (3) *(See English 575.)*

DROP SECONDARY CROSS-LISTED COURSE

475 Teaching English as a Second or Foreign Language II (3) *(See English 475.)***Medieval Studies (674)**

ADD SECONDARY CROSS-LISTED COURSE

431 Medieval Art of the West, 800-1400 (3) *(See Art History 431.)***441 Northern European Painting, 1350-1600 (3)** *(See Art History 441.)***451 The Art of Italy, 1250-1450 (3)** *(See Art History 451.)***Urban Studies (985)**

ADD SECONDARY CROSS-LISTED COURSE

411 The City in the United States (3) *(See Political Science 402.)***412 Survey of Planning (3)** *(See Political Science 403.)***442 Urban Social Geography (3)** *(See Geography 442.)***446 Housing (3)** *(See Political Science 446.)*

DROP

401 The City in the United States (3) *(Same as Planning 401.)***Women's Studies (994)**

ADD SECONDARY CROSS-LISTED COURSE

543 Women, Sport, and Culture (3) *(See Sport Studies 543.)***DEPARTMENT OF MATHEMATICS****Mathematics (641)**

ADD

529 Seminar in Stochastics (1-3) May be repeated. Maximum 12 hours.**545-546 Real and Complex Analysis (3,3)** Measure theory, Lebesgue integration, Hölder and Minkowski inequalities, Radon-Nikodym theorem, Fubini's theorem, holomorphic functions, Cauchy's theorem, Maximum Modulus theorem, Schwarz's lemma, normal families, Riemann mapping theorem.**599 Seminar in Mathematical Presentations (1)**

DROP

541-542 Real Analysis (3,3)**543-544 Complex Analysis (3,3)**

REVISE COURSE TITLE AND DESCRIPTION

561-562 Topology-Geometry (3,3) (I) Topology: topological spaces and continuous functions, separation axioms, product and quotient topologies, connectedness, compactness, complete metric spaces, function spaces, fundamental

group, covering spaces. (II) Geometry: Differential manifolds, Riemannian metrics, geodesics, curvature, complete manifolds.

REVISE COURSE DESCRIPTION

571-572 Numerical Mathematics (3,3) Direct and iterative methods for linear systems. The algebraic eigenvalue problem and the singular decomposition theorem. Newton and quasi-Newton methods for systems of nonlinear equations. Numerical techniques for initial value problems of ordinary differential equations. Two-point boundary value problems. Finite difference and finite element methods for selected partial differential equations. Fast Poisson solvers. Prereq: 445-446, 453, 471-472. (*Same as Computer Science 571-572.*)

DEPARTMENT OF MICROBIOLOGY

Microbiology (684)

ADD CROSS-LISTED SECONDARY COURSE

550 Molecular Epidemiology and Mycology (3) (*See Entomology and Plant Pathology 550.*)

DEPARTMENT OF MODERN FOREIGN LANGUAGES AND LITERATURES

French (405)

REVISE COURSE DESCRIPTION AND PREREQUISITE

430 Theatrical French (4) Comprehensive introduction to dramatic texts, performance, and theatrical production in French. Students collaborate in the creative staging of a French play and they actively participate in its public performance. Writing-emphasis course. Prereq: French 351 or 352. May apply toward major as a literature course.

Spanish (924)

REVISE PREREQUISITE

430 Topics in Hispanic Linguistics (3) Prereq: 323.

SCHOOL OF MUSIC

DROP THE MUSIC HISTORY ACADEMIC DISCIPLINE AND ALL COURSES
ADD NEW DISCIPLINE (MUSICOLOGY) AND COURSES

Musicology (706)

410 Music History Genre (3) Topics vary. May be repeated. Maximum 6 hours.

420 History of Opera (3) Dramatic, vocal, and orchestral elements in opera of Italian, French, and German schools, 1600-present.

430 Symphonic Literature (3) Literature for orchestra from Baroque to present, evolution of symphony.

450 Composer Seminar (3) Life and works of single composer. Subjects vary.

460 Music Aesthetics (3) Nature of music and musical experience, sense perception and emotions, music, and role of artist in society. Aesthetic viewpoint of individuals and historical eras through selected writings.

480 Music in Christian Worship (3) Hymnody, liturgies, and liturgical music.

540 Music of the Medieval and Renaissance Periods (3) Survey of major musical phenomena from c. 900 to c. 1600. Chant, troubadour/trouvere song, Notre Dame polyphony, Ars Nova, Ars subtilior, madrigal, chanson, mass and motet. Musical developments considered against historical, cultural, analytical, and literary frameworks.

550 Music in the Baroque Period (3) From c.1600 to 1750; rise of opera and oratorio, sacred and secular cantatas, instrumental forms, performance practice.

560 Music in the Classic Period (3) Evolution of classical style from pre-classic music to music of Haydn, Mozart, and early Beethoven.

570 Music in the Romantic Period (3) Nineteenth-century musical styles from Beethoven to post-romanticists.

580 Music in the Twentieth Century (3) From 1890, Debussy, to present, Stockhausen and others.

585 Topics in Music of the Americas (3) Topics vary.

586 Topics in Opera (3) Topics vary within operatic repertory from the 17th c. to the present including music and drama; interdisciplinary, race, or gender studies; realism; nationalism; expressionism; minimalism. May be repeated. Maximum 6 hours.

590 Introduction to Ethnomusicology (3) Ethnomusicology as scholarly discipline. History, theories, and methodologies as applied to study of music in culture. Prereq: 380 or equivalent.

593 Independent Study (1-15) See College of Arts and Sciences. Prereq: Consent of school director.

595 Seminar in Ethnomusicology (3) Topics vary. Prereq: 590 and consent of instructor.

596 Seminar in Historical Musicology (3) Topics vary; specific musical genre, composer, or phenomenon. May be repeated. Maximum 6 hours.

Reference Chart for Curriculum System Entry

Current Music History (709) Courses	Fall 2005 Musicology (706) Courses
410	410
420	420
430	430
450	450
460	460
480	480
540	540
550	550
560	560
570	570
580	580
585	585
586	586
590	590
593	593
595	595
596	596

Music Keyboard (712)

ADD

410 Organ Practicum (1) Improvisation, hymn playing, and accompanying on the organ. Prereq: Organ proficiency at the 200 level. May be repeated. Maximum 3 hours.

REVISE PREREQUISITES

460-470 The Organ and Its Literature (3,3) Prereq/Coreq: Musicology 220, consent of instructor.

Music Performance (713)

ADD

572 Electric Bass (1-4) May be repeated. Maximum 8 hours.

583 Guitar (1-4) May be repeated. Maximum 8 hours.

DROP

476 Electric Bass (1-4)

479 Guitar (1-4)

576 Electric Bass (1-4)

579 Guitar (1-4)

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

403 Flute (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 304, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

404 Flute (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 403, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

405 Oboe (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 306, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

406 Oboe (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 405, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

410 Bassoon (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 311, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

411 Bassoon (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 410, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

415 Clarinet (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 316, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

416 Clarinet (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 415, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

420 Saxophone (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 321, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

421 Saxophone (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 420, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

425 Horn (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 326, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

426 Horn (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 425, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

430 Trumpet (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 331, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

431 Trumpet (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 430, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

435 Trombone (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 336, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

436 Trombone (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 435, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

440 Baritone (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 341, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

441 Baritone (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 440, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

445 Tuba (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 346, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

446 Tuba (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 445, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

450 Percussion (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 351, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

451 Percussion (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 450, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

455 Voice (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 356, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

456 Voice (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 455, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

460 Violin (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 361, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

461 Violin (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 460, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

465 Viola (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 366, grade of C or better. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

466 Viola (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 465, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

470 Cello (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 470, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

471 Cello (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 470, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

472 Electric Bass (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 373, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

473 Electric Bass (1-3) By audition only. Prereq: Music General 101 or equivalent. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). Music Performance 472, grade C or higher. May be repeated. Maximum 8 hours.

ADD

474 String Bass (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 375, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

475 String Bass (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 474, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

480 Piano (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 381, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

481 Piano (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 480, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

483 Guitar (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 384, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

484 Guitar (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 483, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

485 Harpsichord (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 386, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

486 Harpsichord (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 485, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

489 Organ (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 390, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE CREDIT HOURS, PREREQUISITE/COREQUISITE, REPEATABILITY

490 Organ (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 489, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE PREREQUISITE/COREQUISITE, REPEATABILITY

494 Composition (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 395, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE PREREQUISITE/COREQUISITE, REPEATABILITY

495 Composition (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 494, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

ADD

496 Composition with Electronic Media (1-3) By audition only. Prereq: Music General 101 or equivalent; Music Performance 396, grade C or higher. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). May be repeated. Maximum 8 hours.

REVISE PREREQUISITE/COREQUISITE, REPEATABILITY

499 Improvisation (1-2) By audition only. Prereq: Music General 101 or equivalent and consent of instructor. Coreq: Ensemble appropriate to degree program (see School of Music Undergraduate Handbook). Cannot be used to satisfy applied music requirement. May be repeated. Maximum 4 times.

Reference Chart for Curriculum System Entry

Current Music Performance (713) Courses	Fall 2005 Courses
579 Guitar	583 Guitar
576 Electric Bass	572 Electric Bass
476 Electric Bass	472 Electric Bass
479 Guitar	483 Guitar

DEPARTMENT OF PHILOSOPHY

Philosophy (745)

ADD

443 Advanced Business Ethics (3) Advanced topics in business ethics. When content varies, may be repeated. Maximum 6 hours.

445 Advanced Environmental Ethics (3) Advanced topics in environmental ethics. When content varies, may be repeated. Maximum 6 hours.

DROP

479 Studies in Recent Continental Philosophy (3)

REVISE TITLE, DESCRIPTION, REPETITION, AND PREREQUISITES

446 Advanced Bioethics (3) Advanced topics in bioethics. When content varies, may be repeated. Maximum 6 hours.

DEPARTMENT OF PHYSICS AND ASTRONOMY

Physics (773)

REVISE PREREQUISITE

561 The Theory of Relativity (3) Prereq or coreq: 531 and 541.

DEPARTMENT OF POLITICAL SCIENCE

Political Science (801)

ADD PRIMARY COURSE AND CROSS-LIST

402 The City in the United States (3) Development and character of U.S. cities. Contemporary issues and selected case studies (*Same as Urban Studies 411.*)

403 Survey of Planning (3) History of city development and of planning. U.S. experience in urban and other levels of planning. State of the art process, comprehensive plan, implementation devices. Planning issues in society. Not for credit for MSP degree. (*Same as Urban Studies 412.*)

446 Housing (3) Nature and demand for housing in the U.S. and abroad. U.S. experience. Private market processes and public influences. Problems of change in housing supply, impact of new technology, and governmental programs to increase supply and quality of housing. *(Same as Urban Studies 446.)*

ADD SECONDARY CROSS-LISTED COURSE

555 Planning and Transportation (3) *(See Civil Engineering 558.)*

ADD

531 Theory of Planning (3) Analysis of nature and objectives of planning process: role of planners and planning function in public decision-making.

544 Information Systems and Networks in Planning (3) Use and impact of computer-based information systems and global networks in planning and public management. Development of practical skills in design of planning-decision support systems, databases, Internet-based tools and geographic information systems (GIS).

545 Planning Research Methods (3) Overall structuring of social science research in planning practice: familiarity with structure of planning literature information sources, decision processes and tools, practice in posing research questions relevant to planning, evaluation methods.

547 Planning Technology (3) Relationships between information technology, society and planning. Overview of other advanced technologies, economic development, and associated social and planning issues.

581 Fundamentals of Planning (3) History of planning, structure and development of urban areas, operations of contemporary planning, trends and issues.

582 Land Use and Comprehensive Planning (3) Concept and framework for Land Use Planning. Development of comprehensive plans. Population, economic and employment forecasting.

583 Economic Analysis and Development (3) Basic methods of policy analysis and planning. Planning for economic change in cities and regions. Economic development and planning process.

584 Environmental Planning (3) Role of planners and planning in maintenance of balance between natural and built environment.

585 Planning Methods (4) Preparation of comprehensive plans for urban areas and regions. Development of baseline data and forecasts, formulation of alternative plans and strategies, and development of plan implementation programs.

586 Planning and Property Development (3) Process of urban physical growth and change: functioning of private sector real estate development and its relationship to planning. Partnership roles of public and private sectors in urban development and redevelopment.

587 Legal Aspects of Planning (3) Legal basis for planning and guiding community development. Legal tools of planning.

588 Sustainable Communities (3) Overview of sustainable communities. Project-based classwork in local community.

589 Urban Design Issues in Planning (3) Analysis of relationships between quality of life and urban design. Review of trends in urban design, New Urbanism. Impacts of design on resource and environmental quality.

590 Practicum in Planning (3) Prereq: Consent of instructor.

597 Special Topics in Planning (1-3) Prereq: Consent of instructor. Can be repeated. Maximum 6 hours.

598 Problems in Planning (1-3) Prereq: Consent of instructor. Can be repeated. Maximum 6 hours.

Reference Chart for Curriculum System Entry

Current Planning (782) Courses	Political Science (801) Courses - Fall 2005
401 (Same as Urban Studies 401)	402 (Same as Urban Studies 411)
402 (Same as Urban Studies 402)	403 (Same as Urban Studies 412)
446	446 (Same as Urban Studies 446)
500	---
502	---
510	581
515	531
520	545
521	544
525	547

Current Planning (782) Courses	Political Science (801) Courses - Fall 2005
530	---
531	582
532	585
537 (See Civil Engineering 558)	555 (See Civil Engineering 558)
538	589
539	---
540	587
543	---
545	586
548	---
550	583
552 (Same as Ecology & Evolutionary Biology 552)	---
553	---
555 (Same as Ecology & Evolutionary Biology 555)	584 (no cross-listing)
556	---
560	---
	588
590	590
591	597
592	---
593	598

DEPARTMENT OF PSYCHOLOGY

Psychology (830)

ADD

431 Psychology of Adjustment (3) Current psychosocial trends and their influence on personal adjustment and mental health. From scientist-practitioner perspectives of theory, research, and application.

DROP

531 Personality and Mental Hygiene (3)

DEPARTMENT OF RELIGIOUS STUDIES

Religious Studies (863)

ADD

401 Texts and the Study of Texts (3) Systematic introduction to the nature and function of (primarily, but not exclusively, oral and written) texts and textual traditions in the study of religion. How texts are made and used historically, how they are recovered and created by scholars, how they are interpreted by religious communities and scholars.

510 Introduction to Pedagogy of Religious Studies (3) Conceptualization, methodology, and practice of teaching about religion and religions in the public university context. Prereq: 503 and consent of instructor.

550 Critical Explorations in Religious Studies (3) Critical examination of selected phenomena of religion from contemporary theoretical or thematic perspectives. Required for students in the MA concentration in religious studies. Prereq: 503. May be repeated. Maximum 6 hours.

551 Comparative Historical Explorations in Religious Studies (3) Critical examination of parallel or contrasting historical phenomena from two or more religious traditions. Required for students in the MA concentration in religious studies. Prereq: 503. May be repeated. Maximum 6 hours.

DROP

504 Theory and Method in the Study of Religion (3)

REVISE TITLE

506 Historical Study of Religions (3)

DEPARTMENT OF SOCIOLOGY

Sociology (915)

ADD

452 Minorities, Crime and Criminal Justice (3) Examines racial/ethnic disparities in criminal offending and victimization, as well as different experiences with law enforcement, judicial and correctional agencies. Emphasis on social justice.

453 Gender and Crime (3) Probes the gendered nature of offending, victimization and criminal justice. Examines the different experiences of males and females, and theories that attempt to explain these differences.

DROP

415 Sociology of Aging (3)

DROP SECONDARY CROSS-LISTED COURSE

471 Sociolinguistics (3) *(See English 471.)*

REVISE PREREQUISITE

505 Foundations of Criminology (3)

REVISE TITLE AND DESCRIPTION

551 Juvenile Delinquency and the Social Structure (3) This course examines how juvenile delinquency policies are shaped by social structures and changes in social perceptions of childhood, crime, and punishment.

DEPARTMENT OF THEATRE

Theatre (976)

DROP

451 Advanced Scenery Technology II (3)

REVISE CREDIT HOURS AND REPETITION

425 Selected Musical Theatre Technique (3) Study and practice of musical theatre material: dance and vocal work. May be repeated. Maximum 6 hours.

REVISE TITLE, CREDIT HOURS, DESCRIPTION, PREREQUISITE, AND REPEATABILITY

450 Special Studies in Entertainment Technology (1-3) Content varies. May be repeated. Maximum 9 hours.
Prereq: consent of instructor.

REVISE TITLE, DESCRIPTION, AND PREREQUISITE

452 Entertainment Technology II (3) Automation systems in live entertainment, including advanced rigging and flying for stage and film. Prereq: 352 or consent of instructor.

REVISE COURSE TITLE, DESCRIPTION, AND REPEATABILITY

464 Computer Aided Drafting for the Theatre (3) Introduction to entertainment drafting. Emphasis on 2D graphical standards, drafting techniques, drawing layout and presentation.

REVISE COURSE TITLE, DESCRIPTION, AND PREREQUISITE

550 Special Studies in Entertainment Technology (1-3) Content varies. Prereq: consent of instructor. May be repeated. Maximum 9 hours.

REVISE COURSE TITLE, DESCRIPTION AND PREREQUISITE

564 Advanced Computer Aided Drafting for the Theatre (3) Advanced drafting techniques. Emphasis on 3D solid modeling, rendering, and publication. Prereq: 464 or consent of instructor.

DEPARTMENT OF URBAN AND REGIONAL PLANNING

DROP ACADEMIC DISCIPLINE AND ALL COURSES
See Political Science for equivalency table.

Planning (782)

401 The City in the U.S. (3) Primary course.
Secondary course: Urban Studies 401.

402 Survey of Planning (3)

446 Housing (3)

500 Thesis (1-15)

502 Registration for Use of Facilities (1-15)

510 Fundamentals of Planning (3)

515 Theory of Planning (3)

520 Planning Research Methods (3)

521 Information Systems and Networks in Planning (3)

525 Planning Information Systems (3)

530 Planning Policy Analysis (3)

531 Land Use Analysis (3)

532 Planning Methods (4)

537 Planning and Transportation (3) Secondary course.
Primary course: Civil Engineering 558.

538 Urban and Site Design (3-6)

539 Planning for Historic Preservation (3)

540 Legal Aspects of Planning (3)

543 Cultural Resources Planning (3)

545 Planning and Property Development (2)

550 Economic Development Planning (3)

552 Development Planning in the Third World (3) Primary course.
Secondary course: Ecology and Evolutionary Biology 552.

553 International Planning (3)

555 Environmental Planning (3) Primary course.
Secondary course: Ecology and Evolutionary Biology 555.

556 Futures Planning (3)

590 Practicum (3)

591 Special Topics (1-3)

592 Readings in Planning (1-3)

593 Problems in Planning (1-3)

II. Program Changes**DEPARTMENT OF AUDIOLOGY AND SPEECH PATHOLOGY**

REINSTATE MASTER OF ARTS, AUDIOLOGY MAJOR

- On page 82 of the 2004-2005 Graduate Catalog, 1st column, just before Doctor of Audiology, Audiology Major, insert the following:

MASTER OF ARTS**Audiology Major**

Graduate study leading to the MA degree in Audiology is available only to those students accepted to and enrolled in the AuD program or the PhD program in Speech and Hearing Sciences. This degree is awarded to students who desire a master's degree as part of their progress toward a doctorate.

A student must be in good standing within the AuD or PhD program and must have completed a minimum of 58 credits of academic coursework at the 500 or 600 levels. Students must pass a qualifying examination or equivalent in their doctoral program and must earn a B or better in all courses that are to count toward the 58 credit hour total.

DEPARTMENT OF BIOCHEMISTRY AND CELLULAR AND MOLECULAR BIOLOGY

REVISE COURSE REQUIREMENTS FOR THE MASTER OF SCIENCE – BIOCHEMISTRY AND CELLULAR AND MOLECULAR BIOLOGY MAJOR

- On page 85 of the 2004 - 2005 Graduate Catalog, 1st Column, Master of Science Requirements, 1st bullet

Biochemistry and Cellular and Molecular Biology 511, 512, 515, and 6 hours of 516.

- On page 85 of the 2004 - 2005 Graduate Catalog, 2nd Column, Doctor of Philosophy Requirements, 1st bullet

Biochemistry and Cellular and Molecular Biology 511, 512, and 515, and 6 hours of 516.

DEPARTMENT OF BOTANY

ELIMINATE DEPARTMENT

DROP THE MS – BOTANY MAJOR

DROP THE PHD – BOTANY MAJOR

- On pages 9-10 delete Botany references from the chart
- On page 87-88 of the 2004-2005 Graduate Catalog, Department of Botany, delete entire department section.

DEPARTMENT OF COMPUTER SCIENCE

REVISE COURSE REQUIREMENTS FOR THE MASTER OF SCIENCE, COMPUTER SCIENCE MAJOR

- On page 92 of the 2004-05 Graduate Catalog, 1st Column, revise text:

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.

- On page 92 of the 2004-2005 Graduate Catalog, 1st column, Master of Science, Computer Science Major, Requirements, 2nd sentence, Revise

Computer Science 530, 560 and 580 or 581 are required for the degree.

REVISE COURSE REQUIREMENTS FOR THE COMPUTER SCIENCE MINOR

- On page 92 of the 2004-2005 Graduate Catalog, 1st column Computer Science Minor, revise:

The graduate minor consists of any two of the four core courses (530, 560, 580, 581) plus an additional 3 hours of graded computer science graduate-level courses at or above the 400 level.

REVISE COURSE REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY, COMPUTER SCIENCE MAJOR

- On page 92 of the 2004-2005 Graduate Catalog, 2nd column, Doctor of Philosophy, Computer Science Major, Requirements, 3rd sentence, revise

Computer Science 530, 560 and 580 or 581 are required for the degree.

DEPARTMENT OF ENGLISH

REVISE ADMISSION PROCEDURES

- On page 98 of the 2004-2005 Graduate Catalog, 2nd column, 2nd paragraph, revise:

Detailed information about the master's and doctoral programs, and about individual graduate courses, may be obtained by writing the Director of Graduate Studies in English, 306 McClung Tower. A prospective student may contact the department for application forms and procedures or may download them from the departmental graduate website at <http://web.utk.edu/~english/graduate.php>. For additional information, please visit the graduate Web site through the College of Arts and Sciences home page at www.artsci.utk.edu.

REVISE REQUIREMENTS FOR THE MASTER OF ARTS, ENGLISH MAJOR

- On page 99 of the 2004-2005 Graduate Catalog, 1st column, Capstone Experience Requirement, delete the heading and the capstone experience paragraph.

REVISE THE WRITING CONCENTRATION FOR THE MASTER OF ARTS, ENGLISH MAJOR

- On page 99 of the 2004-2005 Graduate Catalog, 1st column, Writing Concentration, revise:

The master's program with writing concentration is intended for those students who plan to do free-lance or creative writing, specialize in teaching writing courses at the college level, work as professional editors or writers in business or industry, or pursue doctoral studies.

REVISE EXAMINATION REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY, ENGLISH MAJOR

- On page 100 of the 2004-2005 Graduate Catalog, 1st column, Examinations, revise:

A comprehensive examination which may be divided as the department directs; see the English Department graduate student website. The comprehensive examination is given twice a year, normally in March and September. Before a student may take it, he/she must have completed all coursework required. A student must also have met all requirements for foreign languages before beginning the first part of the examination.

INTERDISCIPLINARY PROGRAMS**Linguistics (623)**

REVISE GRADUATE CERTIFICATE IN LINGUISTICS TO INCREASE HOURS REQUIRED

- On page 108 of the 2004-2005 Graduate Catalog, Graduate Certificate in Linguistics, 3rd paragraph, beginning with the 4th sentence, revise:

A minimum of eighteen credit hours is required; all courses must be selected in consultation with a program advisor, who must approve all courses for individual students prior to their being taken, except that, as noted above, up to six credit hours may be accepted from candidates upon admission. Students will satisfy the requirements of the certificate program by selecting eighteen hours from the following lists, provided that those courses are selected in consultation with a program advisor, who approves their selection. A certificate cannot be earned without program approval by the advisor.

REVISE COURSE REQUIREMENTS FOR THE GRADUATE CERTIFICATE IN LINGUISTICS

- On page 108 of the 2004-2005 Graduate Catalog, Graduate Certificate in Linguistics, Requirements, 2nd Bullet, Revise list of additional courses

Audiology and Speech Pathology 506, 601, 652, English 508, 509, 680, French 421, 422, 510, German 510, 541, 631, 632, Linguistics 400, 411, 426, 429, 435, 471, 472, 474, 476, 477, 485, 490, 575, Spanish 421, 531, Psychology 400, 543, 617, Statistics 531.

REVISE CAPSTONE PROJECT CREDIT FOR THE GRADUATE CERTIFICATE IN LINGUISTICS

- On page 108 of the 2004-2005 Graduate Catalog, Graduate Certificate in Linguistics, Requirements, 3rd Bullet, revise:

A three credit hour capstone project, normally the preparation of a paper for presentation at a professional conference or for publication in a journal, planned and completed in consultation with a program advisor.

DEPARTMENT OF MATHEMATICS

REVISE THE REQUIREMENTS FOR THE PHD – MATHEMATICS MAJOR

DROP THE MATHEMATICAL ECOLOGY CONCENTRATION FOR THE PHD

- On page 10 of the 2004-2005 Graduate Catalog, drop the mathematical ecology concentration for the PHD from the chart

ADD THE MATHEMATICAL ECOLOGY/EVOLUTION CONCENTRATION FOR THE PHD

- On page 10 of the 2004-2005 Graduate Catalog, add the mathematical ecology/evolution concentration for the PHD to the chart
- On page 112 of the 2004-2005 Graduate Catalog, 1st column, Doctor of Philosophy, revise

DOCTOR OF PHILOSOPHY**Mathematics Major****REQUIREMENTS**

For the PhD program in Mathematics, the student must meet the following five requirements in addition to those of the Graduate Council:

- Demonstrate competency in Advanced Calculus and Linear Algebra by either a satisfactory performance on a Diagnostic Examination or by passing the appropriate 400-level course with a grade of B or better by the end of the student's first year of graduate school. The appropriate course for advanced calculus is the 447-48 sequence and for linear algebra is the 457-458 sequence or 453.
- Satisfy either the standard program or the interdisciplinary mathematical ecology/evolution concentration. A student intending to work in mathematical ecology/evolution may complete either, but is encouraged to complete the interdisciplinary mathematical ecology/evolution concentration.
- Take at least two different one-semester research seminars and 599.
- Pass an examination in the field of specialization after requirements in bullets 1-3 have been met. This examination will be given by a committee appointed by the department head. A student may take this specialty examination at most twice.
- Pass a one-year, 600-level sequence in mathematics outside the student's area of specialization. The sequence selected to fulfill this requirement must be approved by the department head and the student's doctoral committee.

These requirements must be completed no later than the start of the student's seventh year (as a mathematics graduate student at UT).

Standard Program

A student must pass written examinations on two of the following year-long sequences: algebra (551-552), analysis (545-546), computational and applied mathematics (571-572), differential equations (535-536), stochastics (523-524), and topology-geometry (561-562). A student must pass one examination by the middle of his/her third year and both examinations by the middle of his/her fourth year. A student may not take any examinations after four failures.

In addition to the two year-long sequences chosen for the written examinations, a student must take four other one-semester 500-level courses from the following list grouped by examination area: algebra (551-552, 555-556), analysis (545-46, 547), computational and applied mathematics (571-572, 574, 575, 577, 578), differential equations (513-514, 515-516, 531-532, 535-536, 537-538, 581-582, 585), stochastics (521-522, 523-524, 525-526), and topology-geometry (561-562, 567-568). These four courses must contain a year-long sequence in an area different from the two written examinations and at least two areas different from the two written examinations.

A grade of B or better is required in each of the four courses, with at least a B+ in two of the courses.

Mathematical Ecology/Evolution Concentration

A student must pass written examinations on mathematical ecology (581-582) and one of the following year-long sequences: analysis (545-546), computational and applied mathematics (571-572), differential equations (535-536), and stochastics (523-524). A student must pass one examination by the middle of his/her third year and both examinations by the middle of his/her fourth year. A student cannot take any examinations after four failures.

In addition to the two year-long sequences chosen for the written examinations, a student must take four other one-semester 500-level courses from the following list grouped by examination area: analysis (545-546, 547), computational and applied mathematics (571-572, 574, 575, 577, 578), differential equations (513-514, 515-516, 531-532, 535-536, 537-538, 585), stochastics (521-522, 523-524, 525-526, 527), and mathematical ecology/evolution (583, Ecology and Evolution Biology 509, 511, 512, 514). For the purposes of this requirement, the following pairs of Ecology and Evolutionary Biology courses count as a one-semester course: 509/514, 511/514, and 512/514.

These four courses must contain a year-long sequence in an area different from the two written examinations and at least two areas different from the two written examinations. A grade of B or better is required in each of the four courses, with at least a B+ in two of the courses.

DEPARTMENT OF PHYSICS AND ASTRONOMY

REVISE COURSE REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY, PHYSICS MAJOR

- On page 128 of the 2004 -2005 Graduate Catalog, 2nd column, Doctor of Philosophy, Physics Major, Requirements, first two sentences, revise

All students are expected to take the graduate core curriculum in physics consisting of the following courses: Physics 521-522, 531, 541, 551, and 571. Students concentrating in chemical physics may substitute Chemistry 572 for Physics 551, and should complete at least 6 semester hours from Chemistry 530, 540, 570, 571, 573, 595, 630, 670, and 690.

DEPARTMENT OF POLITICAL SCIENCE

MOVE MASTER OF SCIENCE IN PLANNING (MSP) – PLANNING MAJOR AND CONCENTRATIONS (ENVIRONMENTAL PLANNING, LAND USE PLANNING, REAL ESTATE DEVELOPMENT PLANNING, TRANSPORTATION PLANNING) TO DEPARTMENT OF POLITICAL SCIENCE

REVISE REQUIREMENTS FOR THE MASTER OF SCIENCE IN PLANNING (MSP) – PLANNING MAJOR

- On page 130 of the 2004-2005 Graduate Catalog add the following text.

MASTER OF SCIENCE IN PLANNING

Planning Major

The Master of Science in Planning (MSP) degree is the normal route for entry into professional positions in urban and regional planning or related fields. Graduates are candidates for positions in regional, city, county, and metropolitan planning agencies; in local, state, and federal agencies concerned with physical, economic, and administrative planning; in private business and organizations dealing with development problems; and in private consulting. The Planning Accreditation Board, a joint undertaking of the American Institute of Certified Planners and the Association of Collegiate Schools of Planning, accredits the MSP program.

ADMISSION

Applicants for admission to the program must have a bachelor's degree or its equivalent. Normally, an overall grade point average of 3.0 and an average of 3.2 in the last two years of undergraduate courses are required. In addition, a composite score of 1100 on the verbal and quantitative parts of the GRE is desired. Students must demonstrate proficiency in the use of software applications for the personal computer, as well as in statistics. Taking an undergraduate statistics course can satisfy the latter. Achieving a satisfactory grade in Political Science 596 can fulfill the software applications requirement. Exceptions to this requirement will be considered on an individual basis.

REQUIREMENTS

The MSP is a non-thesis program requiring 43 credit hours. Specific requirements include the following:

- Core Curriculum (28 hours) 514, 546, 560, 581, 582, 583, 584, 585, 589, and 596 (1 credit). Students should plan to enter the program in the fall term to take core courses in the proper sequence.
- Concentration (9 hours) Each student must choose a concentration from the following: environmental planning, transportation planning, land use, urban design, and real estate development/economic development. Concentration courses are drawn from a prescribed set in the subject area from the department's curriculum and from other departments in the university. Students may also design their own concentration in consultation with the coordinator of the MSP degree program.
- Recommended Internship (6 hours) Internships are arranged in consultation with the coordinator of the MSP degree program.
- Comprehensive Exam: Each student must pass a final comprehensive exam. Successful completion of a comprehensive exam is required before graduation. The exam will normally be taken after completion of the core requirements in the second year. Based on the material generally used by the American Institute of Certified planners (AICP), this requirement provides an additional capstone experience as well as preparation for meeting AICP professional certification requirements.

DEPARTMENT OF PSYCHOLOGY

REVISE CATALOG TEXT TO CLARIFY REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY, PSYCHOLOGY MAJOR, COUNSELING PSYCHOLOGY CONCENTRATION

- On page 135 of the 2004-2005 Graduate Catalog, 1st column, Counseling Psychology Concentration, Requirements, 2nd paragraph and 1st sentence of 3rd paragraph, revise

Students are assigned a temporary faculty advisor upon admission to the program. By the end of their first calendar year students are expected to have selected an advisory committee. Prior to taking their comprehensive examinations, students must form and meet with their doctoral committee, present an acceptable program of study to the doctoral committee, and have their research competency approved by the program's research review committee. The examinations cover the counseling psychology core and the student's cognate.

In addition to approving a student's program of study, the doctoral committee approves the student's dissertation proposal and verifies that the student's dissertation is acceptable for the doctoral degree.

DEPARTMENT OF SOCIOLOGY

REVISE COURSES IN THE ENVIRONMENTAL SOCIOLOGY CONCENTRATION, SOCIOLOGY MAJOR, DOCTOR OF PHILOSOPHY AND MASTER OF ARTS DEGREES

- On page 138 of the 2004-2005 Graduate Catalog, 2nd column, Sociology description, 2nd paragraph, 3rd sentence, revise:

The environmental sociology concentration includes 560, 661 and 665.

DEPARTMENT OF THEATRE

ADD CONCENTRATION IN DRAMATURGY FOR THE MASTER OF FINE ARTS, THEATRE MAJOR

- On page 140 of the 2004-2005 Graduate Catalog, 2nd column, 1st paragraph under Theatre, revise

The Department of Theatre offers the Master of Fine Arts degree with major in Theatre, concentrations in costume design, lighting design, scene design, performance, and dramaturgy. Not all areas of concentration accept applicants every year.

- On page 141 of the 2004-2005 Graduate Catalog, 1st column, Master of Fine Arts, between Design Concentration and Performance Concentration, add:

Dramaturgy Concentration

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. Dramaturgy students must also satisfy a foreign language requirement (proficiency in one language or reading knowledge of two).

DEPARTMENT OF URBAN AND REGIONAL PLANNING

ELIMINATE DEPARTMENT

- On page 142 of the 2004-2005 Graduate Catalog, 1st column, Department of Urban and Regional Planning, delete the entire section.

COLLEGE OF BUSINESS ADMINISTRATION**ALL CHANGES EFFECTIVE: FALL 2005****I. Course Changes****DEPARTMENT OF MARKETING AND LOGISTICS****Marketing (632)**

REVISE TITLE AND DESCRIPTION

612 Quantitative Research Methods (3)

Quantitative research process: problem formulation, Measurement reliability, validity and scale development, Experimental design and analysis, survey design and analysis, sampling, ethical considerations, and international issues in quantitative research. (*Same as Logistics 612.*)

REVISE TITLE

613 Qualitative Research Methods (3)

REVISE DESCRIPTION

615 Consumer Behavior Research (3) Theoretical perspective and research processes describing people in their roles as buyers, users, and evaluators of goods and services. Includes coverage of both end user consumers and industrial buyers. Topics of interest include motivation, personality, attitude formation and change, information processing, choice, decision making for buying and selling activities as well as operational management decision making processes, consumption, post-purchase consumption, cultural and demographic differences, consumer socialization, and ethical considerations.

Logistics (626)

REVISE TITLE OF SECONDARY CROSS-LISTED COURSE

612 Quantitative Research Methods (3) (*See Marketing 612.*)

II. Program Changes**COLLEGE OF BUSINESS ADMINISTRATION**

REVISE HOURS REQUIRED FOR THE DUAL MS-MBA PROGRAM

- On page 150 of the 2004-2005 Graduate Catalog, in the left column revise the second sentence and in the right column, revise the showcase to reduce total hours from 61-67 to 60 hours.
- On page 150, under Requirements, second sentence

The MBA curriculum consists of 30 hours of common course work in the College of Business Administration and 12 hours of common coursework in the College of Engineering.

- On page 150 of the 2004-2005 Graduate Catalog, revise the showcase to:

August—First Year		
Business Administration 511	MBA Core I	3
Fall—First Year		
Business Administration 512	MBA Core II	15
*504	Product Development Process	1
Spring		
Business Administration 513	MBA Core III	9
*506	Product Selection and Evaluation	2
*508	Integrated Product, Process, and Manufacturing System Design	3
Summer		
—	Internship	—
*509	Multidisciplinary Project	1
Fall—Second Year		
*509	Multidisciplinary Project	1
—	Engineering major	9
Spring		
—	MBA hub course elective	3
*509	Multidisciplinary Project	1
—	Engineering major	9
Summer (first session)		
*594	Culminating Integrated Project Report	3
		Total 60

*See showcases in the College of Engineering for course disciplines.

ADD DUAL MS-MBA PROGRAMS IN AEROSPACE ENGINEERING, BIOMEDICAL ENGINEERING, CHEMICAL ENGINEERING, ELECTRICAL ENGINEERING, COMPUTER ENGINEERING, MATERIALS SCIENCE AND ENGINEERING

- On page 150, 1st paragraph below the showcase, add new dual programs to catalog text

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

DEPARTMENT OF ECONOMICS

REVISE REQUIREMENTS FOR THE PHD IN ECONOMICS

- On page 156 of the 2004-2005 Graduate Catalog, first column, under Requirements, delete bullet item 2:
- History of Economics: Completion of 515 with a grade of B or better, or by qualifying examination.

HUMAN RESOURCE DEVELOPMENT PROGRAM

(The Human Resource Development Program moved to the Department of Management effective Fall 2004.)

MOVE THE MASTER OF SCIENCE, HUMAN RESOURCE DEVELOPMENT MAJOR TO THE DEPARTMENT OF MANAGEMENT

MOVE THE PHD, HUMAN RESOURCE DEVELOPMENT CONCENTRATION (BUSINESS ADMINISTRATION MAJOR) TO THE DEPARTMENT OF MANAGEMENT

MOVE HUMAN RESOURCE DEVELOPMENT (529) ACADEMIC DISCIPLINE AND COURSES TO DEPARTMENT OF MANAGEMENT

COLLEGE OF COMMUNICATION AND INFORMATION**ALL CHANGES EFFECTIVE: FALL 2005****I. Course Changes****SCHOOL OF INFORMATION SCIENCES****Information Sciences (560)**

ADD

510 Information Environment (3) Generation, production, management, dissemination, and use of information. Roles of information in society, information seeking and user behavior, information industry, economics of information products and services, technological and organizational change, information professions, and issues.

536 The Information Society (3) Competing theoretical positions and definitions regarding the existence and importance of the information society; historical evolution and selected key contributors of information society theories; issues of globalization including critical perspectives of economic, social, political, and cultural aspects.

556 Knowledge Management for Information Professionals (3) Covers classic theories of knowledge and theories of first and second-generation knowledge management paradigms. Introduces related disciplines and the knowledge lifecycle, types of knowledge, organizational learning, intellectual capital, communities of practice, knowledge ecologies, knowledge audits, knowledge sharing repurposing of information, uses of information technology, and roles of information professionals in developing knowledge management initiatives.

558 Library Services for a Diverse Society (3) Examines the issues of diversity and multiculturalism in libraries and librarianship. Considers general issues affecting institutions in addition to libraries. Examines specific social characteristics and the social/cultural groups constructed around these characteristics. Considers the needs of such groups, and library responses to these needs, and how to create a more diverse library profession.

575 Valuing Diversity: International and Intercultural Resources for Youth (3) Examines texts and materials for youth that reflect the contemporary settings and lives of young people from all over the world. This course will review the scholarship of literature and film to determine how to recognize stereotypes; how to understand publishing worlds; and how to recognize universal themes that transcend ethnicity, religion, gender, class, and nationhood.

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

587 Mining the Web (3) Covers strategies for mining the Web, Web engines and directories, cognitive accessibility, Web design and development, and usability engineering.

DROP

485 Introduction to Electronic Communications and Information Resources on the Internet (3)

486 Advanced Electronic Communications and Information Resources on the Internet (3)

490 Information Environment (3)

592 Seminar in Information Sciences (3-6)

593 Independent Study (3-6)

DROP SECONDARY CROSS-LISTED COURSE

569 Media and Technology Production Techniques (3) Workshop strategy: basic photography, audio production, multi and single camera TV production, basic digital video editing, and other media/technology techniques important for improving communication in variety of presentation or instructional settings. (*See Instructional Technology 569.*)

REVISE TITLE

540 Research Methods for Information Professionals (3)

564 Archives and Records Management (3)

571 Resources and Services for Children (3)

572 Resources and Services for Young Adults (3)

580 Information Science Theory (3)

591 Independent Project or Research (3)

REVISE TITLE AND ADD PREREQUISITE

553 Specialized Information Agencies and Services (3) Prereq: 550 or consent of instructor.

REVISE TITLE AND DESCRIPTION

520 Information Representation and Organization (3) The structure and organization of intellectual content regardless of format. Emphasis on how content is created, exchanged, and stored so it can be found. Includes standards and best practice for describing and characterizing intellectual content.

565 Digital Libraries (3) Technological and social aspects of electronic publishing and digital libraries. Technologies and standards that enable electronic publishing and digital libraries. History of electronic publishing and digital libraries and their impact on user needs and information provision.

582 Information Systems Planning and Evaluation (3) Information systems used in libraries and information agencies. Emphasizes planning, evaluation and system implementation. Covers usability engineering, interface design, and human computer interaction.

583 Information Systems Problems and Principles (3) Use of systems theory and analytical tools for understanding and improving information systems. Emphasizes the interaction between technology, processes, and stakeholders. Focuses on problem identification and problem-solving techniques, system design representations, object-oriented system design, system prototyping, and project management.

REVISE DESCRIPTION

530 Information Access and Retrieval (3) Information access, retrieval, and use. Information seeking, user interfaces, information services and tools. Database structure, search engines, query logic, and evaluation of retrieval system performance.

REVISE TITLE, DESCRIPTION, AND ADD PREREQUISITE

574 Resources and Services for Adults (3) Examines strategies and procedures for developing programs in libraries. The course provides public service librarians with the knowledge and skills to create, evaluate, and improve programs with some emphasis on reader's advisory. Prerequisite: 560.

REVISE REPEATABILITY

594 Graduate Research Participation (3) Advanced research techniques under supervision of staff research director whose area coincides with interests of student. Prereq: Consent of advisor and research director. May be repeated. Maximum 6 hours. Satisfactory/No Credit grading only.

ADD PREREQUISITE

552 Academic Libraries (3) Prereq: 550 or consent of instructor.

554 Public Library Management and Services (3) Prereq: 550 or consent of instructor.

**Reference Chart for Curriculum System Entry
Information Sciences (560)**

Current Course	Fall 2005
490	510

SCHOOL OF JOURNALISM AND ELECTRONIC MEDIA

Journalism and Electronic Media (592)

REVISE TITLE

520 Seminar in Political Communication (3)

II. Program Changes

COLLEGE OF COMMUNICATION AND INFORMATION

REVISE REQUIREMENTS FOR THE MASTER OF SCIENCE, COMMUNICATION MAJOR.

- On Page 170, Column 2, Paragraph 2

Additional hours may be required for those who do not have academic prerequisites, and an internship may be required for those who do not have professional experience in the field that they wish to study.

SCHOOL OF INFORMATION SCIENCES

REVISE REQUIREMENTS FOR THE MASTER OF SCIENCE, INFORMATION SCIENCES MAJOR, TO ALLOW MORE HOURS TO BE TAKEN OUTSIDE THE SCHOOL OF INFORMATION SCIENCES

- On page 173, 2nd column, 2nd paragraph, revise the text:

Information Sciences Major

The program leading to the Master of Science degree with a major in information sciences requires 42 semester hours of graduate courses, including 3 courses required of all students. Either a thesis or a non-thesis option is available, with 6 hours required for thesis credit. At least 33 hours must be taken within the School of Information Sciences curriculum, and up to 9 hours outside of the school can be taken, including a maximum of 6 hours outside the college. No more than 6 hours may be taken from another university.

REVISE COURSES REQUIRED FOR THE MASTER OF SCIENCE, INFORMATION SCIENCES MAJOR.

- On page 173, 2nd column, 3rd paragraph revise text:

Required Courses

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

Highly Recommended Courses

The faculty regards the following courses as vital to professional success: 540, 550, 560. These courses address research, management and leadership in information organizations, and the concepts of developing and managing collections. One course, 550, serves as a prerequisite to courses in academic, corporate and public library management.

REVISE COURSE REQUIREMENTS FOR INITIAL ENDORSEMENT FOR NON-LICENSED TEACHERS WITH NO MASTER'S DEGREE IN LIBRARY OR INFORMATION SCIENCES

- On page 174, 1st column, 2nd paragraph:

Initial Endorsement for Non-Licensed Teachers with no Master's Degree in Library or Information Sciences

For those students who do not hold the master's degree, the requirements for initial endorsement include the three required courses plus 551, 567, 571, 572, 573, 585, 595 and 2 electives (upon approval of faculty advisor). In addition, students must complete three corequisite courses from the College of Education, Health, and Human Sciences (six credit hours) that do not count toward the master's degree requirements. Students pursuing the initial endorsement must follow the non-theses option. Upon completion of the requirements, students will earn a master's degree in information sciences and a Tennessee State Department of Education license as a School Library Information Specialist.

REVISE REQUIREMENTS FOR INITIAL ENDORSEMENT FOR NON-LICENSED TEACHERS WITH A MASTER'S DEGREE IN LIBRARY OR INFORMATION SCIENCES

- On page 174, 1st column, 3rd paragraph:

Initial Endorsement for Non-Licensed Teachers with a Master's Degree in Library or Information Sciences

For those students who hold an ALA-accredited master's degree and have approval of the faculty advisor, the requirements are a maximum of 24 hours within the school's program, including the required Information Sciences 595. In addition, students must complete three corequisite courses from the College of Education, Health, and Human Sciences (6 credit hours) beyond the required 24 hours. Upon completion of the requirements, students will earn a Tennessee State Department of Education license as a School Library Information Specialist.

REVISE REQUIREMENTS FOR ADDITIONAL ENDORSEMENT FOR LICENSED TEACHERS WITH A MASTER'S DEGREE

- On page 173, 1st column, 4th paragraph:

Additional Endorsement for Licensed Teachers with a Master's Degree

The requirements include the three required courses plus 551, 567, 571, 572, 585 and 596 (which must be taken twice). Upon completion of the requirements, students will earn a Tennessee State Department of Education additional endorsement as a School Library Information Specialist.

REVISE REQUIREMENTS FOR ADDITIONAL ENDORSEMENT FOR LICENSED TEACHERS WITHOUT A MASTER'S DEGREE

- On page 173, 1st column, 5th paragraph:

Additional Endorsement for Licensed Teachers without a Master's Degree

The requirements include the three required courses plus 551, 567, 571, 572, 585, and 596 (which must be taken twice) plus 5 electives (upon approval of the faculty advisor). Upon completion of the requirements, students will earn a master's degree in Information Sciences and a Tennessee State Department of Education additional endorsement as a School Library Information Specialist.

REVISE COURSE REQUIREMENTS FOR THE MASTER OF SCIENCE, INFORMATION SCIENCES MAJOR, NON-THESIS OPTION

- On page 174, 2nd column, 1st paragraph:

Non-Thesis Option

Upon completion of the program, all students who elect the non-thesis option must take and pass a written comprehensive examination. Students may take no more than a total of 12 hours from 591, 594, 599. The number of satisfactory/no credit courses in a student's program is limited to one-fourth of the total credit hours required (10 of 42).

COLLEGE OF EDUCATION, HEALTH, AND HUMAN SCIENCES**ALL CHANGES EFFECTIVE: FALL 2005****I. Course Changes****DEPARTMENT OF CONSUMER SERVICES MANAGEMENT****Hotel, Restaurant, and Tourism (514)**

ADD

614 Trends and Issues in Hospitality and Tourism (3) Examination of contemporary issues in hospitality and tourism.**615 Literature and Thought in Hospitality and Tourism (3)** Evaluation of hospitality and tourism management literature with emphasis upon research literature, development of scholarly thought, and identification of potential areas of further study.**Retail and Consumer Sciences (865)**

REVISE CREDIT LEVEL (REMOVE GRADUATE CREDIT)

411 Entrepreneurship and Small Business Management (3)**DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND POLICY STUDIES**

DROP ACADEMIC DISCIPLINE AND ALL COURSES

Educational Administration And Policy Studies (288)**455 Seminar in Student Leadership (1)****500 Thesis (1-15)****502 Registration for Use of Facilities (1-15)****503 Problems in Lieu of Thesis (2-3)****513 Administrative and Organizational Theory (3)****514 Leadership Themes in Literature (3)****515 Human Relations and Communication in Administration (3)****516 Research Methods (3)****518 Educational Specialist Research and Thesis (3)****523 Administration of Special Services (3)****529 Politics and Public Relations in Education (3)****534 Program Evaluation in Education (3)** Secondary course.

Primary is Curriculum, Educational Research and Evaluation 534.

535 Administrative Applications of Micro Computers (3)**536 Policy Issues in Higher Education Quality Assurance (3)****537 Student Assessment in Higher Education (3)****542 The College Student and the Court (3)****543 American Higher Education in Transition (3)****544 School Finance and Business Management (3)****548 Supervision and Personnel Administration (3)****553 Strategic Planning (3)****554 Policy Issues in Educational Law, K-12 (3)****560 Grant Writing and Project Management (3)****570 Student Affairs Administration in Higher Education: Theory and Practice (3)****572 Student Development Theory and Practice in Higher Education (3)****574 The College Student (3)****577 Educational Statistics (3)** Secondary course.

Primary is Educational Psychology 577.

580 Internship in Educational Administration (3)**583 Educational Leadership—Principalship (3)****590 Special Topics (1-3)****592 Field Problems in Educational Administration and Supervision (3)****593 Independent Study (1-3)****595 Seminar in School Leadership, K-12 (3)**

599 Internship in College Student Personnel (1-6)
600 Doctoral Research and Dissertation (3-15)
604 Seminar in Educational Administration and Policy Studies (1-4)
605 Advanced Seminar in Administrative Theory (3)
606 Leadership Forum (2)
610 Internship in Educational Administration (3)
612 Modes of Inquiry (3) Primary course. Secondary is Educational Psychology 612.
614 Statistics for Educational Administrators (3)
615 Research Design (3)
616 Research Methods (3)
617 Case Study Methods in Educational Research (3)
619 Administration and Governance of Higher Education (3)
629 Seminar in Policy Issues in Education (3)
640 Policy Issues in College and University Law (3)
645 Curriculum and Instruction in Higher Education (3)
646 Personnel Administration (3)
650 Fiscal Policy Issues in Higher Education (3)
656 Legal Issues in Education (3)
658 Conflict Management (3)
670 Values and Ethics in Educational Leadership (3)
680 Administration of Complex Organizations (3)
690 Special Topics (1-3)
693 Independent Study (1-3)

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELING

Counselor Education (255)

ADD

480 Interviewing and Counseling Techniques (3) An introduction to basic helping skills necessary to the preparation of counselors, teachers, and others involved in human service delivery.

Educational Psychology (310)

REVISE CROSS-LISTING OF PRIMARY COURSE

577 Educational Statistics (3) (*Same as Educational Administration 577.*)

DROP SECONDARY COURSE

612 Modes of Inquiry (3)

ADD NEW ACADEMIC DISCIPLINE AND COURSES

Higher Education Administration (461)

ADD

455 Seminar in Student Leadership (1) Topics to be assigned. To develop knowledge and skills in leadership roles for resident assistants, student government leaders, student activities, and other student organizations. May be repeated. Maximum 3 hours.

500 Thesis (1-15) P/NP only.

502 Registration for Use of Facilities (1-15) Required for the student not otherwise registered during any semester when student uses University facilities and/or faculty time before degree is completed. May not be used toward degree requirements. May be repeated. Satisfactory/No Credit grading only.

503 Problems in Lieu of Thesis (2-3) May be repeated. Maximum 9 hours. Satisfactory/No Credit grading only.

514 Leadership Themes in Literature (3) Review and analysis of selected literature works-Novels, biographies, poetry, plays, essays, personal letters and speeches, history-for lessons that enhance understanding of leadership role, values, and effectiveness.

536 Policy Issues in Higher Education Quality Assurance (3) Exploration of historic and contemporary approaches to definition and demonstration of quality in education and examination of contemporary policy issues related to quality assurance.

537 Student Assessment in Higher Education (3) Outcome assessment in American higher education: origins of assessment policies, rationales for assessment policy and practice, constructs and outcomes typically assessed, methods for conducting assessment, and uses of assessment data. Philosophies, priorities, and values, recent assessment efforts in higher education.

542 The College Student and the Court (3) Legal precedent affecting student personnel services in public higher education. Student discipline, housing, dress, organizations, activities fees, tuition and related federal regulations.

543 American Higher Education in Transition (3) History, philosophy, purposes, functions, organizations and programs in American higher education.

570 Student Affairs Administration in Higher Education: Theory and Practice (3) Historical, philosophical and organizational perspective. Functional areas comprising field and major issues.

572 Student Development Theory and Practice in Higher Education (3) Theoretical framework of college student personnel services and practical application of theory in student services environment. Applicable administrative theory, human development theory and evaluation assessment techniques.

574 The College Student (3) Critical examination of the characteristics and concerns of current college students in relation to the direction and provision of student services and student personnel administration.

593 Independent Study (1-3) Consent of instructor required. May be repeated. Maximum 9 hours.

595 Special Topics (1-3) May be repeated. Maximum 12 hours.

599 Internship in College Student Personnel (1-6) Prereq: Consent of instructor. May be repeated. Maximum 6 hours. Satisfactory/No Credit grading only.

600 Doctoral Research and Dissertation (3-15) P/NP only.

604 Seminar in Educational Administration and Policy Studies (1-4) Directed readings and research in educational administration. May be repeated. Maximum 6 hours. Satisfactory/No Credit grading only.

619 Administration and Governance of Higher Education (3) Trends, structure and process of collegiate governance. Development of understanding of administrative theory and practice in higher education.

640 Policy Issues in College and University Law (3) Legal precedent affecting organizations, administration, and finance of higher education. Academic freedom, faculty termination, religion, tort liability, administrative law, academic due process and affirmative action in employment.

645 Curriculum and Instruction in Higher Education (3) Examination of teaching, learning and curriculum in higher education.

650 Fiscal Policy Issues in Higher Education (3) Revenue sources, appropriation process, budget procedures, cost analysis, and fiscal management in public and independent colleges and universities.

693 Independent Study (1-3) May be repeated. Maximum 12 hours.

695 Special Topics (1-3) May be repeated. Maximum 12 hours.

ADD AND CROSS-LIST PRIMARY COURSE

605 Advanced Seminar in Administrative Theory (3) Interdisciplinary seminar. Readings selected by faculty for research and scholarly value from early to current classic theoretical studies and current periodical literature in administrative and organizational theory. (*Same as Educational Administration 605.*)

658 Conflict Management (3) Social conflict and its management. Causes of interpersonal, inter-group, and organizational conflict, skills and strategies used to manage conflict, conflict management models associated with different sectors of human activity, and current organizational practices for managing destructive conflict. (*Same as Educational Administration 658.*)

670 Values and Ethics in Educational Leadership (3) Examination of moral and ethical dimensions of the work of educational leaders. (*Same as Educational Administration 670.*)

ADD AND CROSS-LIST SECONDARY COURSE

513 Administrative and Organizational Theory (3) *(See Educational Administration 513.)*
516 Research Methods (3) *(See Educational Administration 516.)*
534 Program Evaluation in Education (3) *(See Curriculum, Educational Research, and Evaluation 534.)*
606 Leadership Forum (2) *(See Educational Administration 606.)*
614 Statistics for Educational Administrators (3) *(See Educational Administration 614.)*
615 Research Design (3) *(See Educational Administration 615.)*
616 Research Methods (3) *(See Educational Administration 616.)*
617 Case Study Methods in Educational Research (3) *(See as Educational Administration 617.)*
629 Seminar in Policy Issues in Education (3) *(See Educational Administration 629.)*
680 Administration of Complex Organizations (3) *(See Educational Administration 680.)*

HEALTH AND SAFETY PROGRAMS

MOVE HEALTH (449) ACADEMIC DISCIPLINE AND COURSES FROM FORMER DEPARTMENT OF HEALTH AND EXERCISE SCIENCE TO HEALTH AND SAFETY PROGRAMS

Health (449)

REVISE GRADING

585 Seminar in Gerontology (1) Satisfactory/No Credit grading only.

MOVE PUBLIC HEALTH (839) ACADEMIC DISCIPLINE AND COURSES FROM FORMER DEPARTMENT OF HEALTH AND EXERCISE SCIENCE TO HEALTH AND SAFETY PROGRAMS

MOVE SAFETY (890) ACADEMIC DISCIPLINE AND COURSES FROM FORMER DEPARTMENT OF HEALTH AND EXERCISE SCIENCE TO HEALTH AND SAFETY PROGRAMS

DEPARTMENT OF EXERCISE, SPORT, AND LEISURE STUDIES

MOVE EXERCISE SCIENCE (347) ACADEMIC DISCIPLINE FROM FORMER DEPARTMENT OF HEALTH AND EXERCISE SCIENCE

Exercise Science (347)

REVISE TITLE, DESCRIPTION, AND CROSS-LIST

601 Research Seminar (1) Research topics in different aspects of exercise science, sport psychology, and sport sociology. May be repeated. Maximum 6 hours. Satisfactory/No Credit grading only. *(Same as Sport Studies 601.)*

REVISE TITLE AND DESCRIPTION

521 Physical Activity Epidemiology Methods (3) Epidemiological foundation for research in physical activity related to individual and population-based health. Emphasis on analytic methods, surveys, and research designs. Focus on issues within special populations (e.g., elderly, children). Prereq: Course in statistics or consent of instructor.

Sport Studies (959)

ADD

538 Professional Practice Issues in Sport Studies (3) Study and cultural critique of various aspects of professional practice in sport studies.

ADD SECONDARY CROSS-LISTED COURSE

601 Research Seminar (1) *(See Exercise Science 601.)*

CROSS-LIST PRIMARY COURSE

543 Women, Sport, and Culture (3) (*Same as Women's Studies 543.*)

DROP

537 Sport Psychology Seminar (1)

DEPARTMENT OF INSTRUCTIONAL TECHNOLOGY AND EDUCATIONAL STUDIES**Cultural Studies in Education (271)**

ADD

512 History of Women's Education (3) Historical study of the institutions and philosophies of education that have shaped the education of girls and women in the United States.

Curriculum, Educational Research, and Evaluation (256)

REVISE CROSS-LISTING OF PRIMARY COURSE

534 Program Evaluation in Education (3) (*Same as Educational Administration 534; Higher Education Administration 534.*)

Instructional Technology (569)

ADD AND REQUEST TO OFFER ELECTRONICALLY-MEDIATED COURSE

577 Internet-Mediated Collaborative Learning (3) Use of the Internet to conduct collaborative learning activities among diverse, geographically-distributed participants. Participants will need unrestricted access to the Internet to complete all course activities. Prereq: 575 or 521.

- Total Number of Weeks: 15
- Total Expected Student Time Commitment: in excess of 180 hours
- Course Designation: Technology-Enhanced Course
- Student Site Requirements: Class will meet four times on Saturdays (9 am – 3 pm) during the semester. All other student-to-student and student-to-instructor interactions will be mediated via internet-based communications tools.
- What is the nature and quantity of structured student/instructor interaction? Class will meet four times during the semester on Saturdays (9 am – 3 pm). The instructor will hold on-line office hours throughout the week through email and class listserv. Students will be required to maintain on-line journals chronicling their progress in participating in the instructional activities of others and in developing and implementing their own instructional activities. Through these several communications media, the frequency and quality of the instructional interactions will be both extensive and sufficient to provide "just in time" feedback to students doing individualized project-development work throughout the semester.
- What is the nature and quantity of structured student/student interaction? Students will interact via the course listserv, personal email and through threaded discussion groups and real time chats. They will also select to use some subset of these media to interact with their own students during the networking projects.

REVISE PRIMARY COURSE TO DROP CROSS-LISTING

569 Media and Technology Production Techniques (3)

DEPARTMENT OF THEORY AND PRACTICE IN TEACHER EDUCATION

ADD NEW ACADEMIC DISCIPLINE AND COURSES

Educational Administration (293)

ADD

515 Human Relations and Communication in Administration (3) Development and use of effective interpersonal communication skills and channels, inter-group relations, supportive work climates, personnel motivation, conflict management skills, and role of values, attitudes, and expectations in administration.

518 Educational Specialist Research and Thesis (3) May be repeated. P/NP only.

523 Administration of Special Services (3) Legal, programmatic, and ethical responsibilities of educational administrators in design and implementation of special service programs within school settings. Special learner characteristics, program categories, service delivery models, and legal/ethical frameworks. Inclusion and full service delivery.

529 Politics and Public Relations in Education (3) School/community relations in political context of modern, complex society. Administrator and supervisory competencies: political, social, ethnic, cultural, and racial environments in which schools operate.

535 Administrative Applications of Micro Computers (3) DOS, word processing, data based management, spread sheets, and computer communications. Review and development of specific administrative applications: scheduling, attendance, student record systems, and accounting.

544 School Finance and Business Management (3) For prospective building level administrators. Financial and logical management tasks and procedures in individual school setting.

548 Supervision and Personnel Administration (3) Basic supervisory and personnel concepts and related competencies at the micro-organizational level: interviewing, personnel planning, collecting and maintaining employee information, supervision of personnel, performance appraisal and staff development.

553 Strategic Planning (3) Processes for improving decision-making function through use of both quantitative and qualitative planning techniques.

554 Policy Issues in Educational Law, K-12 (3) Logical arrangement of case and statutory materials for public school administrators and teachers; problems concerning law and public education.

560 Grant Writing and Project Management (3) Processes of finding funding for research efforts, writing grant proposals, negotiating with funding sources, implementing and maintaining funded programs, and closing out projects at end of funding support.

580 Internship in Educational Administration (3) Field experience in appropriate educational setting working directly with administrator. At end of planned program of study. Placement by department assignment. May be repeated. Maximum 6 hours.

583 Educational Leadership-Principalship (3) Knowledge, skills and relationships for principals to be effective educational leaders.

592 Field Problems in Educational Administration and Supervision (3) May be repeated. Maximum 6 hours.

596 Seminar in School Leadership, K-12 (3) On-site study of quality school processes throughout region. May be repeated. Maximum 6 hours.

610 Internship in Educational Administration (3) Opportunity for doctoral students and advanced graduate students to gain experience in performance of critical tasks of educational administration under supervision of practitioner and University representative. May be repeated at discretion of student's committee. Maximum 12 hours. Satisfactory/No Credit grading only.

614 Statistics for Educational Administrators (3) An introductory statistics course that focuses on the application of statistical procedures to problems in educational administration. Included are: scales of measurement, hypothesis testing, and descriptive and inferential statistical techniques. Computer applications are explored. (*Same as Higher Education Administration 614.*)

615 Research Design (3) The foundations of designing, conducting, and evaluating quantitative, qualitative, and mixed-methods research and the philosophical assumptions underlying these approaches. Topics covered include: identifying a research problem, reviewing the literature, specifying a purpose, writing research questions and hypotheses, and collecting and analyzing data. (*Same as Higher Education Administration 615.*)

616 Research Methods (3) The techniques of multiple regression, analysis of covariance, and multivariate analysis as applied to problems in educational administration. Computer applications are explored. Prereq: 614 (*Same as Higher Education Administration 616.*)

617 Case Study Methods in Educational Research (3) Methods, techniques and strategies consistent with case study approaches to inquiry in educational and related settings. Prereq: 615 (*Same as Higher Education Administration 617.*)

629 Seminar in Policy Issues in Education (3) Local, state, and federal education policy: theory analysis, development and implementation. Why education policy is changing rapidly, ways to follow and influence education policy, and conceptual frameworks to use for future understanding. (*Same as Higher Education Administration 629.*)

646 Personnel Administration (3) Personnel administration functions for professional and supporting staff in educational organizations. Recruitment, selection, placement, personnel policies, employee wage and salary administration, fringe benefits, collective negotiations, human relations, staff development, and staff evaluation.

656 Legal Issues in Education (3) School law; constitutional foundations as they relate to public education at state and local levels.

ADD PRIMARY COURSE AND CROSS LIST

513 Administrative and Organizational Theory (3) Introduction to theoretical administrative and organizational foundations of management and leadership of educational programs and institutions. *(Same as Higher Education Administration.)*

516 Research Methods (3) Descriptive, experimental, and quasi-experimental designs to help students without quantitative backgrounds to read and understand technical professional literature. Introduction to inferential statistics, needs assessments, and evaluation procedures. *(Same as Higher Education Administration.)*

606 Leadership Forum (1-3) Development of research, evaluation, policy analysis skills and critical analysis and evaluation of philosophical principles undergirding American education. Continuous enrollment for 2 years, on-campus. May be repeated. Maximum 12 hours. Satisfactory/No Credit grading only. *(Same as Higher Education Administration.)*

680 Administration of Complex Organizations (3) Concepts and theoretical formulations to understand, analyze, evaluate, and change complex educational programs and organizations. *(Same as Higher Education Administration 680.)*

ADD SECONDARY CROSS-LISTED COURSE

534 Program Evaluation in Education (3) *(See Curriculum, Educational Research, and Evaluation 534.)*

577 Educational Statistics (3) *(See Educational Psychology 577.)*

605 Advanced Seminar in Administrative Theory (3) *(See Higher Education Administration 605.)*

658 Conflict Management (3) *(See Higher Education Administration 658.)*

670 Values and Ethics in Educational Leadership (3) *(See Higher Education Administration 670.)*

Reference Chart for Curriculum System Entry

Current Courses	Fall 2005 Courses
EAPS 455	HEA 455
EAPS 500	HEA 500
EAPS 502	HEA 502
EAPS 503	HEA 503
EAPS 513	EA 513 (P) HEA 513 (S)
EAPS 514	HEA 514
EAPS 515	EA 515
EAPS 516	EA 516 (P) HEA 516 (S)
EAPS 518	EA 518
EAPS 523	EA 523
EAPS 529	EA 529
EAPS 534(S) CREV 534(P)	CREV (P) HEA 534 (S) EA 534 (S)
EAPS 535	EA 535
EAPS 536	HEA 536
EAPS 537	HEA 537
EAPS 542	HEA 542
EAPS 543	HEA 543
EAPS 544	EA 544
EAPS 548	EA 548
EAPS 553	EA 553
EAPS 554	EA 554
EAPS 560	EA 560
EAPS 570	HEA 570
EAPS 572	HEA 572
EAPS 574	HEA 574
EAPS 577 (S) EPS 577 (P)	EPS 577 (P) EA 577 (S)
EAPS 580	EA 580
EAPS 583	EA 583
EAPS 590	HEA 595
EAPS 592	EA 592

Current Courses	Fall 2005 Courses
EAPS 593	HEA 593
EAPS 595	EA 596
EAPS 599	HEA 599
EAPS 600	HEA 600
EAPS 604	HEA 604
EAPS 605	HEA 605 (P) EA 605 (S)
EAPS 606	EA 606 (P) HEA 606(S)
EAPS 610	EA 610
EAPS 612 (P) EPS 612 (S)	----- (dropped)
EAPS 614	EA 614 (P) HEA 614 (S)
EAPS 615	EA 615 (P) HEA 615 (S)
EAPS 616	EA 616 (P) HEA 616 (S)
EAPS 617	EA 617 (P) HEA 617 (S)
EAPS 619	HEA 619
EAPS 629	EA 629 (P) HEA 629 (S)
EAPS 640	HEA 640
EAPS 645	HEA 645
EAPS 646	EA 646
EAPS 650	HEA 650
EAPS 656	EA 656
EAPS 658	HEA 658 (P) EA 658 (S)
EAPS 670	HEA 670 (P) EA 670 (S)
EAPS 680	EA 680 (P) HEA 680 (S)
EAPS 690	HEA 695
EAPS 693	HEA 693

(P) Primary course

(S) Secondary course

EA Educational Administration (293)

EAPS Educational Administration and Policy Studies (288)

EPS Educational Psychology (310)

CREV Curriculum, Educational Research, and Evaluation (256)

HEA Higher Education Administration (461)

Elementary Education (322)

DROP

523 Diagnosis and Correction of Children's Difficulties in Learning Mathematics (3)**Mathematics Education (642)**

ADD

523 Diagnosis and Correction of Children's Difficulties in Learning Mathematics (3) Children's difficulties in learning mathematics and procedures for helping classroom teachers correct difficulties. Prereq: 522 or equivalent or consent of instructor.

Reference Chart for Curriculum System Entry

Current Course	New Course Number Effective Fall 2005
Elementary Education (322) 523	Mathematics Education (642) 523

Science Education (899)

REVISE TITLE, DESCRIPTION, PREREQUISITES

531 Teaching Science to Young Children: K-4 (3) Recent trends in methods, materials and content in teaching science to students in grades K-4.

REMOVE PREREQUISITE

565 Instructional Trends and Issues in Science Education (3)**596 Curriculum Trends in Science Education (3)****628 Advanced Studies in Science Education (3)****696 Research Trends in Science Education (3)**

Special Education (932)

REVISE TITLE, DESCRIPTION, PREREQUISITES

420 Field Experience in Special Education Programs (3) Practicum in teaching special education programs: planning, developing, implementing and evaluating instruction. Prereq: 402, admission to Teacher Education Program: Coreq: 419 and/or 471. Satisfactory/No Credit grading only.

II. Program Changes**COLLEGE OF EDUCATION**

REVISE ADMISSION CRITERIA FOR PHD - EDUCATION MAJOR

- On page 181 of the 2004-2005 Graduate Catalog, revise Admission Criteria to

Admission Criteria

Admission decisions for applicants to the PhD in Education are based on multiple criteria. Applicants are expected to present Verbal and Quantitative GRE scores equal to or higher than the 50th percentile, based on the norms in effect at the time the test was taken. An applicant with either a Verbal or Quantitative subtest score that is less than the 50th percentile will be expected to submit a proportionally higher, off-setting second subtest score (e.g., a Verbal subtest score at the 60th percentile may off-set a Quantitative subtest score at the 40th percentile). Current GRE Verbal and Quantitative interpretative data are available from Educational Testing Service at <http://www.ets.org>

Applicants are expected to earn a minimum score of 4.5 points on the Analytic Writing subtest (for score interpretation see: <http://www.gre.org/interpret.html>).

Applicants should be aware that departments and/or concentration areas may have GRE requirements which exceed those indicated above.

Information regarding other admission criteria (e.g., GPA, letters of reference, writing samples, etc.), as well as GRE requirements for non-native English speaking applicants are available through the academic department in which the specific concentration is located (see previous section of catalog for concentration/department affiliation).

REVISE RESIDENCE REQUIREMENT FOR THE PHD - EDUCATION MAJOR

- On page 182 of the 2004-2005 Graduate Catalog, revise the residency requirement as follows:

Residence Requirement

The residence requirement for students in the PhD with a major in education is two consecutive semesters of full-time enrollment.

DEPARTMENT OF EDUCATIONAL ADMINISTRATION AND POLICY STUDIES

ELIMINATE DEPARTMENT

- On pages 188-191 of the 2004-2005 Graduate Catalog, eliminate the department of Educational Administration and Policy Studies. Programs and courses will move to other departments in the college (specifically, Educational Psychology and Counseling Department and the Department of Theory and Practice in Teacher Education).

DROP DEGREE/MAJOR/CONCENTRATIONS

Doctor of Education (EdD) – Educational Administration and Policy Studies Major
Educational Administration and Policy concentration
Higher Education Administration concentration

DROP CONCENTRATIONS

Leadership 21 Concentration (Educational Administration Major – MS)
Educational Administration and Supervision Concentration (Educational Administration Major – EdS)
Educational Administration and Policy Studies Concentration (Education Major – PhD)

MOVE PROGRAMS

Master of Science – College Student Personnel major to: Department of Educational Psychology and Counseling
Master of Science – Educational Administration major (no concentration) to: Department of Theory and Practice in Teacher Education
Specialist in Education – Educational Administration major (no concentration) to: Department of Theory and Practice in Teacher Education

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELING**DROP DOCTOR OF EDUCATION – EDUCATIONAL PSYCHOLOGY AND COUNSELING MAJOR – COLLABORATIVE LEARNING CONCENTRATION**

- On pages 196 - 197 of Graduate Catalog, delete the description and requirements of EdD degree (under heading of Educational Psychology and Counseling – Collaborative Learning Program).

ADD COLLABORATIVE LEARNING SPECIALIZATION TO THE PHD, EDUCATION MAJOR, EDUCATIONAL PSYCHOLOGY CONCENTRATION

- On page 194 of the 2004-2005 Graduate Catalog add:

DOCTOR OF PHILOSOPHY**Education Major • Educational Psychology Concentration • Collaborative Learning Specialization**

http://web.utk.edu/~edpsych/grad/collab_learning/default.html

The collaborative learning specialization addresses the advanced educational needs of professionals working in a variety of settings including business, government, higher education, and non-profit organizations. Participants study the collaborative learning process and engage in action research in the context of their own professional practices. A cohort of doctoral students is admitted every other year.

REQUIREMENTS

Doctoral students in the collaborative learning specialization are expected to complete a minimum of 93 hours of graduate credit above the baccalaureate degree. Required is a two-year residency, consisting of six consecutive semesters in which the student will enroll in a minimum of 6-9 credit hours of course work in each of four semesters and a minimum of 9 hours in each of two consecutive semesters. These hours are distributed among the following categories:

- **Concentration Core in Educational Psychology (15 hours).** The concentration core consists of a minimum of one course in the area of Collaborative Learning and one course from each of the other specializations in Educational Psychology: Adult Education and Applied Educational Psychology.
- **Specialization Core in Collaborative Learning (24 hours).** The specialization core consists of four courses in the area of Collaborative Learning plus the doctoral seminar. Educational Psychology 630 Doctoral Seminar in Collaborative Learning is taken on a continuous basis, beginning with the first semester of the student's residency and culminating at the end of the second year of residency, excluding summers. Three credit hours are awarded per semester for a total of 12 hours of credit.
- **Related Studies (30 hours).** The related studies component incorporates three areas of study:
 - (1) Research Methods (15 hours). This set of courses normally includes courses in qualitative and quantitative research methods and statistics. Educational Psychology 530 is required.
 - (2) Cognate (6 hours). Courses taken in an area outside the major area of study.
 - (3) Area (12 hours). Additional courses of the student's choice that support his or her program emphasis.
- **Dissertation Research (24 hours).** The focus of the student's dissertation research is his or her own professional practice and therefore must involve some form of action research methodology.

ADD CATALOG TEXT FOR THE HIGHER EDUCATION ADMINISTRATION PROGRAMS

- On page 197 of the 2004-2005 Graduate Catalog, add the following section describing the Higher Education Administration Programs. The new description should appear just before the section on the Master of Science Major in College Student Personnel.

HIGHER EDUCATION ADMINISTRATION PROGRAMS

Under Higher Education Administration, two programs are offered: a major in college student personnel and a concentration in higher education administration under the PhD major in education. Following are program goals/mission, admissions, and requirements for each of these two programs.

MOVE THE MASTER OF SCIENCE, COLLEGE STUDENT PERSONNEL MAJOR TO THE DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELING

- On page 197 of the 2004-2005 Graduate Catalog, add new description of the MS major in college student personnel (formerly in the Education Administration and Policy Studies Department) to appear as follows

MASTER OF SCIENCE · College Student Personnel Major

Mission/Purpose. The college student personnel program is a two-year, practitioner-oriented master's degree designed to prepare student personnel administrators and administrative needs of colleges and universities. Philosophically based in college and university administration and resting on standards articulated by the Council for Advancement of Standards for Student Services/Student Development programs, the program prepares individuals for a wide and growing variety of student and university service positions in post-secondary institutions including the following: enrollment services in admissions, orientation, records, financial aid; academic advising; housing; athletics; disability services; career services; student activities and leadership development; institutional research and assessment; advancement and alumni relations, Greek life; and international education.

Admission. Students are admitted to the college student personnel program each spring for matriculation in the fall. Prospective students must submit current GRE scores (within the past five years). In addition, the following information must be submitted to the department office (program coordinator) by March 1st: College Student Personnel Program Application form, 3 rating/reference forms; application to the Office of Graduate Admissions. It is recommended that all materials be submitted by February 15.

Requirements. The college student personnel program requires a minimum of 36 semester hours, including 6 hours of practicum experience. Students are required to complete either a thesis or problems-in-lieu of thesis as a culminating activity.

ADD PHD CONCENTRATION IN HIGHER EDUCATION ADMINISTRATION (EDUCATION MAJOR)

- On page 197 of the 2004-2005 Graduate Catalog, add a new concentration in higher education administration to the PhD in Education. The description should follow the MS college student personnel description.

DOCTOR OF PHILOSOPHY · Education Major · Higher Education Administration Concentration

Mission/Purpose. The concentration in higher education administration under the PhD with a major in education offers advanced graduate study to those students aspiring to enhance their leadership knowledge and skill for service in their current positions, to establish knowledge and skill bases for more responsible executive leadership appointment, to build the capacity and inclination for active participation in policy dialogue related to the purpose and performance of higher education, and to prepare selected scholars for service in faculty and policy scholar roles. Interdisciplinary in design, the program features core course work in higher education foundations, leadership and organizational theory, research foundations, and specialization interests. The program also features forum and seminar experiences for all students in a Humanities and Research Seminar in the first year of the program and an Issues and Inquiry Seminar in the second year of the program.

Admissions. Applicants must submit current (taken within the past 5 years) GRE scores that equal or exceed the minimums expected for applications to the PhD with a major in Education (see the PhD in Education section of this catalog for those details). Applicant must also submit: three letters of recommendation, Application for Graduate Study at the University of Tennessee, Application for PhD Study for the College and Department, Official transcripts of all previous undergraduate and graduate work, and a Writing Sample. An overall GPA of 3.3 in previous graduate study is required, and an interview may be requested of applicants to ascertain match of an applicant's goals with resources and goals of the program.

Requirements. The program requires completion of approximately 48-57 semester hours of course work (exclusive of dissertation enrollment), completion of a written and oral comprehensive examination (an overall GPA of 3.5 is required to take the comprehensive examination), and successful completion and defense of dissertation. The doctoral residence requirement is met by two consecutive terms of full time enrollment.

REVISE REQUIREMENTS FOR THE MASTER OF SCIENCE, COUNSELING MAJOR, MENTAL HEALTH COUNSELING CONCENTRATION

- On page 194 of the 2004-2005 Graduate Catalog, revise to

MASTER OF SCIENCE**Counseling Major · Mental Health Counseling Concentration**

The master's program in mental health counseling (60-semester hours) is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). The program requires a 900-hour internship in the community during the second year to prepare students for practice. Students in the mental health counseling concentration complete a program of study, which includes core courses, clinical courses, and electives. A thesis option is available. Through careful selection of electives and individualized programming, students are able to develop the skills to work in settings that emphasize alcohol and drug abuse, services to children, youth, families, and the elderly, and career development, employment, and correctional counseling. Graduates of the program will receive endorsement for licensure as a licensed professional counselor with mental health service provider designation (LPC) and for board certification by the National Board of Certified Counselors (NBCC).

REQUIREMENTS**Year 1**

Counselor Education 431.....	3
Counselor Education 525.....	3
Counselor Education 551.....	3
Counselor Education 554.....	3
Counselor Education 555.....	3
Counselor Education 556.....	3
Counselor Education 550.....	3
Psychology 512 or Educational Psychology 510	3
Counselor Education 500 or electives	6
Year 1 Total	30

Year 2

Counselor Education 521.....	3
Counselor Education 535.....	3
Counselor Education 552.....	3
Counselor Education 559.....	9
Counselor Education 570.....	3
Psychology 573 or Social Work 524	3
Counselor Education 651.....	3
Counselor Education 500 or electives	3
Year 2 Total	30

Total program hours 60

REVISE REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY, EDUCATION MAJOR, COUNSELOR EDUCATION CONCENTRATION

- On page 196 of the 2004-2005 Graduate Catalog, replace description under heading of Doctor of Philosophy, Education Major, Counselor Education Concentration to

The doctoral concentration in counselor education at the University of Tennessee is designed to prepare experienced counseling professionals to advance their careers in the education, supervision, and research of counselors. The doctoral program is for those students who have completed a master's degree in counseling or counseling-related fields who aspire to one of the following careers: (1) college, university, or community college teaching positions in Counselor Education or related fields; (2) supervisory positions in schools, community agencies, state departments of education; (3) counseling positions in student development programs and counseling centers in higher education; and/or (4) private mental health counseling/consultation practice employee assistance programs.

The doctoral program requires advanced course work, internship, and dissertation hours of study beyond the master's degree. Students in the PhD concentration in counselor education will work toward endorsement for counseling licensure, if licensure has not been received prior to entering the doctoral program. During the program doctoral students will review the necessary criteria for the license they seek and will plan to meet those criteria. To be considered for acceptance, the applicant must have:

- Master's degree in counseling or counselor-related field
- Preference given to those with a 3.5 GPA on any graduate work completed prior to application
- Minimum of two years of work experience in counseling or counseling-related field
- Fitness for the program, including self-awareness and emotional stability as indicated by references and interview
- Preference given to those students who score equal to or higher than the 70th percentile on the verbal area and the 50th percentile on the quantitative area of the GRE, based on the norms that were in effect when the test was taken, and a 4.5 on the Analytic Writing subtest.
- Potential for leadership and advocacy as indicated by references, publications, presentations, and other professional activities
- Expertise in technological applications

In addition, general graduate admission standards for international students require a transcript from the home country indicating an equivalent of the University of Tennessee grade point average of 3.0 or higher. English language proficiency requirements include a minimum score of 575 on the written test of the TOEFL (with a minimum of 52 on each sub score or comparable score for electronic version) and scores on the GRE that meet the admission requirements.

REVISE CATALOG

- On page 192 of the 2004-2005 Graduate Catalog, revise the list of departmental degrees under the heading of Department of Educational Psychology and Counseling:

MAJORS	DEGREES
College Student Personnel	MS
Counseling	MS
Educational Psychology	MS
School Counseling	EdS
School Psychology	EdS
Education	PhD

The Department of Educational Psychology and Counseling offers graduate programs leading to degrees, majors, and concentrations in:

Master of Science

College student personnel major
 Educational psychology major
 Adult education concentration
 Applied educational psychology concentration
 Counseling major
 Mental health counseling concentration
 Rehabilitation counselor education concentration
 School counseling concentration

Educational Specialist

School counseling major
 School psychology major

Doctor of Philosophy

Education major
 Counselor education concentration
 Educational psychology concentration
 Higher education administration concentration
 School psychology concentration

DEPARTMENT OF EXERCISE, SPORT, AND LEISURE STUDIES

MOVE THE FOLLOWING TO DEPARTMENT OF EXERCISE, SPORT, AND LEISURE STUDIES FROM THE DEPARTMENT OF HEALTH AND EXERCISE SCIENCE

- Exercise Science Major (MS) and concentrations
 Biomechanics/Sports Medicine concentration
 Exercise Physiology concentration
- Exercise Science concentration (PhD - Education major)

REVISE REQUIREMENTS FOR THE SPORT MANAGEMENT CONCENTRATION (MASTER OF SCIENCE – SPORT STUDIES MAJOR)

- On page 214 of the 2004-2005 Graduate Catalog, revise the Sport Management Concentration to

MASTER OF SCIENCE**Sport Studies Major****Sport Management Concentration**

The sport management concentration provides the opportunity for students to have a quality academic experience and to gain professional experience as they prepare for careers in the sports industry.

REQUIREMENTS**Sport Studies Major • Sport Management Concentration (Project Option)**

	Hours Credit
Sport Management 511	3
Sport Management 532	3
Sport Management 535	3
*Sport Management Electives.....	6

Sport Studies Elective	3
² Electives	12
Sport Management 501 – Project	3
Total	33

Sport Studies Major • Sport Management Concentration (Thesis Option)

	Hours Credit
Sport Management 511	3
Sport Management 532	3
Sport Management 535	3
¹ Sport Management Electives	6
Sport Studies Elective	3
² Electives	6
Thesis	6
Total	30

¹ Sport Management 440, 512, 530, 540, 544, 553, 554, 555, 570, 580.

² These courses can be taken within Exercise, Sport, and Leisure Studies or outside the department.

A total of six hours may be earned in Sport Management 590 and 595 combined.

REVISE REQUIREMENTS FOR THE SPORT STUDIES CONCENTRATION (MASTER OF SCIENCE – SPORT STUDIES MAJOR)

- On page 215 of the 2004-05 Graduate Catalog, revise to:

**Sports Studies Concentration
REQUIREMENTS
Thesis and Non-Thesis Options**

Most students in sport psychology choose the non-thesis option. Students who choose the non-thesis option are required to take a written comprehensive examination. The thesis option is available only upon consultation with and approval of the student's advisor. Thesis students sign up for 6 hours of thesis. Sport sociology master's students may elect the thesis or non-thesis option.

All students must complete a minimum of 30 semester hours. Students must select a minimum of 15 hours from the following Sport Studies courses: 505, 507, 514, 533, 534, 535, 542, 543, *593 (1-3), *594 (1-3), *595 (1-3), *601 (1-3) *633. Students may select additional courses relevant to their professional and career goals from other departments.

*These courses may be repeated.

REVISE COURSE REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY, EDUCATION MAJOR, SPORT STUDIES CONCENTRATION

- On page 215 of the 2004-2005 Graduate Catalog, revise to:

**DOCTOR OF PHILOSOPHY
Education Major • Sport Studies Concentration**

The PhD with a major in education offers a concentration in sport studies with areas of specialization in sport sociology and sport psychology. The program stresses an interdisciplinary approach to course work and research and expects its 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 teach in higher education and/or to conduct work within applied educational and sport settings.

REQUIREMENTS

The program usually takes 3 years (2 years of coursework and 1 year for the dissertation) and includes:

Concentration	15 credits
*Research	15 credits
Specialization	9 credits
Cognate Area	6 credits
Dissertation	24 credits.
*(3 hours of Sports Studies 601 included)	

DEPARTMENT OF HEALTH AND EXERCISE SCIENCE

DEPARTMENT WAS ELIMINATED FALL 2004

MOVE THE FOLLOWING TO THE DEPARTMENT OF EXERCISE, SPORT, AND LEISURE STUDIES:

- Exercise Science major (MS) and concentrations:
 - Biomechanics/Sports Medicine
 - Exercise Physiology

MOVE THE FOLLOWING TO HEALTH AND SAFETY PROGRAMS:

- Public Health major (MPH) and concentrations:
 - Community Health Education
 - Gerontology
 - Health Planning/Administration
 - Veterinary Public Health
- Gerontology minor
- Safety major (MS) and concentrations:
 - Emergency Management
 - Safety Management
- Dual MS-MPH Program, Public Health major
- Community Health Concentration (PhD - Human Ecology major)

HEALTH AND SAFETY PROGRAMS

MOVE THE FOLLOWING TO HEALTH AND SAFETY PROGRAMS FROM FORMER DEPARTMENT OF HEALTH AND EXERCISE SCIENCE:

- Public Health major (MPH)
 - Community Health Education
 - Gerontology
 - Health Planning/Administration
 - Veterinary Public Health
- Safety major (MS) and concentrations:
 - Emergency Management
 - Safety Management
- Dual MS-MPH Program, Public Health major and concentrations
- Human Ecology major, (PHD) Community Health Concentration
- Gerontology minor

- On page 201 of the 2004-2005 Graduate Catalog, move the Exercise Science Programs, descriptions and courses from the former department of Health & Exercise Science, to the Department of Exercise, Sport, and Leisure Studies on page 213.
- On page 203 of the 2004-2005 Graduate Catalog, move the Human Ecology major, (PHD) Community Health Concentration to Health and Safety Programs

NOTE: THE MASTER OF SCIENCE, HEALTH PROMOTION AND HEALTH EDUCATION MAJOR has been dropped – See G503 of the November 18, 2004 Graduate Council Minutes.

- On pages 13, 180, 201 and 203 remove all references from the catalog.

DEPARTMENT OF INSTRUCTIONAL TECHNOLOGY AND EDUCATIONAL STUDIES

REVISE REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY · EDUCATION MAJOR · CULTURAL STUDIES OF EDUCATIONAL FOUNDATIONS CONCENTRATION

- On page 209 of the 2004-2005 Graduate Catalog, revise footnotes 2 and 4 as follows:

²Instructional Technology and Educational Studies 601 (3). Select one course in each of the following areas: Cultural Studies in Education 607; Instructional Technology 521, 679, or advisor approved substitute; Curriculum, Educational Research and Evaluation 534, 558, 675, or 676.

⁴Select three courses in one of the following areas: Philosophy of Education (Cultural Studies in Education 526, 539, 544, 547, 548, or 608); Sociology of Education (Cultural Studies in Education 545, 549, 648, or 652); History of Education (Cultural Studies in Education 511, 512, 539, 546, 609, or 625).

REVISE COURSE REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY · EDUCATION MAJOR · CURRICULUM, EDUCATIONAL RESEARCH AND EVALUATION CONCENTRATION

- On page 209 of the 2004-2005 Graduate Catalog, revise the Curriculum, Educational Research and Evaluation concentration footnotes 2 as follows:

²Instructional Technology and Educational Studies 601 (3). Select one course in each of the following areas: Cultural Studies in Education 550, 592, or 607; Instructional Technology 521, 679, or advisor approved substitute; Curriculum, Educational Research and Evaluation 676.

DEPARTMENT OF THEORY AND PRACTICE IN TEACHER EDUCATION

DROP THE FOLLOWING CONCENTRATIONS FOR THE TEACHER EDUCATION MAJOR (MS)

TRACK 1 – MODIFIED AND COMPREHENSIVE SPECIAL EDUCATION
TRACK 2 – EARLY CHILDHOOD SPECIAL EDUCATION
TRACK 2 - MODIFIED AND COMPREHENSIVE SPECIAL EDUCATION

ADD THE FOLLOWING CONCENTRATIONS FOR THE TEACHER EDUCATION MAJOR (MS)

TRACK 1 – SPECIAL EDUCATION
TRACK 2 – MIDDLE GRADES
TRACK 2 – MODIFIED AND EARLY CHILDHOOD SPECIAL EDUCATION

DROP THE DOCTOR OF EDUCATION · TEACHER EDUCATION MAJOR

- LITERACY LANGUAGE AND ESL EDUCATION CONCENTRATION
- TEACHER EDUCATION CONCENTRATION

- On page 181 and 221 of the 2004-2005 Graduate Catalog, remove the EdD – Teacher Education Major and Concentrations

MOVE EDUCATIONAL ADMINISTRATION MAJOR (MASTER OF SCIENCE) TO DEPARTMENT OF THEORY AND PRACTICE IN TEACHER EDUCATION

ADD THE NEW DESCRIPTION OF THE MS PROGRAM IN EDUCATIONAL ADMINISTRATION

- On page 218 of the 2004-2005 Graduate Catalog, left column under MASTER OF SCIENCE (before Teacher Education Major), add the new description of the MS program in Educational Administration (formerly in Educational Administration and Policy Studies) to the catalog:

MASTER OF SCIENCE

Educational Administration Major

The Master of Science with a major in educational administration is intended for students who are seeking licensure in school administration and is directed toward providing beginning practitioners with the “best practice” knowledge and skills derived from the field and from research. Students are encouraged to transfer these practices into the world of school administration. Specifically, the MS is designed to prepare school principals and supervisors for licensure in Tennessee and for success in their initial administrative assignments. This two-year program combines evening (5:45-8:35 P.M.) and summer classes with on-the-job field activities organized around real school problems.

Initial Licensure Program

The Master of Science with a major in educational administration requires 36 hours of graduate-level coursework, a professional portfolio, and a comprehensive examination. Included in the 36 hours of coursework is a site-based internship. In order to obtain initial administrative licensure from the State of Tennessee, graduates from this program must have three years of experience in schools (i.e., teaching, counseling, etc.). Additionally, students must pass the School Leaders Licensure Assessment (SLLA) examination that is required by the State of Tennessee to obtain initial licensure as a school administrator. It is expected that students admitted to this program possess leadership potential that has been demonstrated in prior experience.

The four major themes of the Master of Science program with a major in educational administration include:

- expansion of the knowledge base that forms the framework of leadership and a broader conceptualization of educational organizations;
- emphasis on the performance dimensions of the principalship and administration with particular attention given to the knowledge, skills, and dispositions underlying performance;
- integration of theory and practice; and
- collaboration between universities and schools.

The University of Tennessee's Master of Science with a major in educational administration is a National Council for Accreditation of Teacher Education (NCATE) approved program that follows the Interstate School Leaders Licensure Consortium (ISLLC) Performance Standards and the National Policy Board for Educational Administration (NPBEA) recommendations for the knowledge, skills, and dispositions required today for school leaders. The program is also actively involved in the University Council for Educational Administration (UCEA), a consortium of leading research universities offering programs in educational administration.

ADMISSION

The applications required by both the Office of Graduate Admissions and the Educational Administration program must be completed. A current Graduate Record Examination (GRE) score (within the past five years) is required for admission and a grade point average (GPA) of 2.7 or higher for undergraduate work or GPA 3.2 or higher for prior graduate work is required. Applicants to the MS program must possess teacher or school-related licensure; have, or will have, by program completion three years teaching experience or experience working in schools; and must interview with an admission committee. Candidates for the educational administration major must possess leadership potential preferably demonstrated by previous leadership experience. Three rating forms must be provided with recommendations from three present or former employers that identify a candidate's strengths, weaknesses, and leadership potential. Interviews with applicants will be held each year in April. Courses will officially start in June.

Requirements	Hours Credit
Core Requirements (513, 515, 548, 553)	12
Specialization (523, 554, 583, 590, 596)	15
Research (516)	3
Internship (580)	6
Total	36

REVISE DESCRIPTION OF THE TRACK 1 AND TRACK 2 MS PROGRAMS

- On page 218 of the 2004-2005 Graduate Catalog, revise the description of the Track 1 and Track 2 MS programs as follows:

Teacher Education Major

The Master of Science with a major in teacher education has two tracks. Track 1 is for students who hold a valid Tennessee teaching license, or for those preparing to teach on the post-secondary level, or for those preparing for careers that do not require teacher licensure. Track 2 is designed for students seeking initial teacher licensure.

Both Track 1 and Track 2 offer thesis and non-thesis options and require students to submit a written comprehensive examination. In addition, students completing theses must sit for an oral examination of their theses.

TEACHER EDUCATION MAJOR

TRACK 1: NON-LICENSURE CONCENTRATIONS

Art education
Early childhood special education
Education of the deaf and hard of hearing
Elementary education
English education
Foreign language/ESL education
Mathematics education
Reading education
Science education
Science education (environmental education)
Social science education
Special education

ADMISSION

Students must meet all current graduate school admission requirements in addition to submitting a departmental application and three rating forms.

REQUIREMENTS

- Completion of a prescribed set of courses: Core Area (9 hours minimum) Theory and Practice in Teacher Education 517, Curriculum, Educational Research, and Evaluation 520 (thesis only), Curriculum, Educational Research, and Evaluation 580 (non-thesis), Instructional Technology 521, 573, or approved Instructional Technology course;
- Concentration Area (12 hours); Related Studies (3-12 hours).
- Completion of thesis or non-thesis option.

Thesis: Minimum 30 semester hours, satisfactory completion of written thesis and oral defense of thesis; 2/3 of total hours for MS degree must be 500-level or above.

Non-Thesis: Minimum 33 semester hours, satisfactory completion of written comprehensive examination; 2/3 of total hours for MS must be 500-level or above.

REVISE CATALOG

- On page 219 of the 2004-2005 Graduate Catalog, revise the Content Fields Teaching – Track 1:

Content Fields Teaching • Track 1

Concentrations in English Education, Foreign Language/ESL Education, Mathematics Education, Science Education, Social Science Education

Non-Thesis Option

	Hours Credit
*Core Area	9
Concentration Area	12
Related Studies.....	12

All classes must be approved by major advisor.

* Theory and Practice in Teacher Education 517; Curriculum, Educational Research, and Evaluation 580; Instructional Technology 521, 573 or other approved Instructional Technology course.

Non-Thesis: Minimum 33 semester hours of approved coursework, and satisfactory completion of written and/or oral comprehensive examination. 2/3 of the total hours for the MS must be 500 level or above.

Thesis Option

Minimum 30 semester hours of approved coursework, 6 hours of Theory and Practice in Teacher Education 500, and satisfactory completion of written thesis and oral defense of thesis. Two-thirds of the total hours for the MS must be 500 level or above.

REVISE CATALOG TEXT

- On page 217-218 revise catalog text from faculty listing to Master of Science – Teacher Education Major:

The Department of Theory and Practice in Teacher Education offers graduate programs leading to degrees, majors, and concentrations in:

Master of Science

Education Administration major

Teacher Education major

Track 1 (does not result in a teaching license)

Art education concentration
 Early childhood special education concentration
 Education of the deaf and hard of hearing concentration
 Elementary education concentration
 English education concentration
 Foreign language/ESL education concentration
 Mathematics education concentration
 Reading education concentration
 Science education concentration
 Science education (environmental education) concentration
 Social science education concentration
 Special education concentration

Track 2 (for individuals seeking an initial teaching license)

Art education concentration
 Education of the deaf and hard of hearing concentration
 Elementary teaching concentration
 Middle grades concentration
 Modified and early childhood special education
 Secondary teaching concentration

Specialist in Education

Educational Administration major

Teacher education major

Elementary education concentration
 English education concentration
 Foreign language/ESL education concentration
 Mathematics education concentration
 Reading education concentration
 Science education concentration
 Social science education concentration

Special education concentration

Doctor of Philosophy

Education major

Early childhood education concentration

Educational administration and supervision concentration

Literacy, language and ESL education concentration

Teacher education concentration

The College of Education, Health and Human Sciences offers the Master of Science, Specialist in Education, and Doctor of Philosophy degrees through the Department of Theory and Practice in Teacher Education. The department houses graduate programs in educational administration and supervision, and teacher education.

Educational Administration and Supervision

Through the educational administration and supervision programs, the department prepares entry-level and executive-level administrators for schools and colleges, and prepares policy scholars to serve in these organizations and in state, regional, and national policy agencies. The graduate degree programs are designed to enrich the knowledge, skills and values requisite to effective leadership in educational practice settings. The graduate programs focus on the preparation and development of administrative and instructional leaders who will serve in the diverse settings of schools and colleges, and educational units of government. Specialized coursework leading to the Urban Education Certificate is available in the area of urban administration.

Teacher Education

The department offers programs for students seeking Tennessee licensure in the following areas: elementary teaching (K-6); middle grades teaching (4-8); secondary content field teaching (7-12) in English education/foreign language education, mathematics education, science education, social sciences education; art education (K-12); English as a Second Language (K-12); modified special education (K-12) and early childhood special education (Prek-3); special education for the deaf and hard of hearing; reading endorsement, and comprehensive special education endorsement. The program features a professional year internship with accompanying coursework, which may lead to a master's degree with a major in teacher education. Specialized coursework leading to a certificate in urban education is also available in the area of urban teaching.

For admission, most programs (except the Track 2 Initial Licensure/ Master of Science) require current scores from the GRE general section, and all require a departmental application form and letters of recommendation. For additional information about the various programs of study and admission, write to the Student Services Center in the College of Education, Health and Human Sciences, Claxton Complex A332. <http://www.utk.edu/departments/advising> or visit the departmental website at <http://web.utk.edu/%7Eetpte/>.

FINANCIAL ASSISTANCE

The department offers a variety of scholarship and financial assistance opportunities and graduate assistantships for qualified students. For application forms visit the departmental website or contact our department office.

MOVE THE EDUCATIONAL ADMINISTRATION MAJOR (SPECIALIST IN EDUCATION) TO THE DEPARTMENT OF THEORY AND PRACTICE IN TEACHER EDUCATION

- On page 220 of the 2004-2005 Graduate Catalog, add the following description of the EdS Program in Educational Administration (formerly part of the Educational Administration and Policy Studies Department) to the Department of Theory and Practice in Teacher Education in the right column just below Specialist in Education:

SPECIALIST IN EDUCATION**Educational Administration Major**

The department offers a Specialist in Education degree with a major in educational administration. This degree is designed for those students who already possess a master's degree. This degree may be used for the school administrator licensure.

ADMISSION

Applicants must complete all applications forms by March 15. These include the Office of Graduate Admissions application and for those interested in licensure, the Educational Specialist in Educational Administration application. A current GRE score is required for admission and a grade point average (GPA) of 2.7 or higher for undergraduate work or GPA of 3.2 or higher for prior graduate work is required. Three rating forms must be provided with recommendations from three present or former employers that identify a candidate's strengths, weaknesses, and leadership potential.

REQUIREMENTS

The EdS with a major in educational administration requires a minimum of 45 hours of study. A final comprehensive examination is required as is a culminating research paper or thesis depending on the program.

Core Requirements (513, 515, 548, 553) 12

Specialization (523, 554, 583, 590, 596)	15
Research (516, * 592, **Elective)	9
Internship	6
580	3
Total	45

*A thesis option is available with approval of advisor.

**Elective from outside the Educational Administration area chosen in consultation with advisor.

ADD EDUCATIONAL ADMINISTRATION AND SUPERVISION CONCENTRATION (DOCTOR OF PHILOSOPHY – EDUCATION MAJOR)

- On page 190 of the 2004-2005 Graduate Catalog, add the concentration in Educational Administration and Supervision to the Department of Theory and Practice in Teacher Education as follows:

DOCTOR OF PHILOSOPHY

Education Major • Educational Administration and Supervision Concentration

The PhD with a major in education is offered with a concentration in educational administration and supervision. The mission of the educational administration and supervision program is to develop leaders committed to the cultivation of integrity, intelligence, identity, and imagination in promoting educational policy and practice.

- Integrity involves cultivating an acute sense of right and wrong and possessing the courage and conviction to act upon moral principles.
- Intelligence involves recognizing and employing a variety of talents in aligning philosophy, theory, principles, and practice.
- Identity involves cultivating a conscious awareness and appreciation of personal values and attributes, developing quality interpersonal relationships, and appreciating the interdependence fostered through community.
- Imagination involves expanding the limits of conventional wisdom by creating new ideas and by actively seeking diverse perspectives.

ADMISSION

Students must submit the University of Tennessee, Knoxville, Graduate Application for Admission and the Educational Administration and Supervision Program Application for Graduate Study. Applicants must submit current (taken within the past 5 years) GRE scores that equal or exceed the minimums expected for applicants to the PhD with a major in Education. Three letters of reference from those who know of the candidate's leadership record and promise are required. An overall GPA of 3.3 in previous graduate study is required for admission to doctoral study and an interview with the faculty may be required. Admissions decisions are made on a holistic basis to discern the candidate's promise for doctoral study and to ascertain the match of the candidate's educational goals with the resources and goals of the department.

REQUIREMENTS

The doctoral program involves approximately 51 semester hours beyond the master's degree, completion of a comprehensive examination, completion of the residency requirement, and submission and defense of the doctoral dissertation. Core educational experiences in leadership and organizational theory, educational history/philosophy, ethics, and policy/research will be required of all doctoral students. Core experiences are complemented by focused study in specializations (urban administration, research, administrative licensure, etc.) via selected courses in the college, in cognate work in departments outside the college, and in readings/independent studies/internship course experiences.

An overall GPA 3.5 on all doctoral work is required to sit for the comprehensive examination. Admission to candidacy requires successful completion of a written and oral comprehensive examination as required by Graduate Studies.

	Hours Credit
Core Requirements*	15
Research**	15
Specialization	15
Cognate	6
Leadership Forum	12
Dissertation	24
Total	87

*Educational Administration 605, 629, 670, 680, 690,

**Educational Administration 614, 615, 616, 617, 690.

REVISE CATALOG TEXT TO REFLECT ADDITION OF EDUCATIONAL ADMINISTRATION AND SUPERVISION CONCENTRATION

- On page 221 of the 2004-2005 Graduate Catalog (in the right column at DOCTOR OF PHILOSOPHY) revise the current description

DOCTOR OF PHILOSOPHY

Education Major

Faculty from the department participate in the delivery of the PhD with a major in education. Concentrations and specializations are available in the following areas:

- Early childhood education (early childhood special education)
- Educational administration and supervision
- Literacy, language, and ESL education (literacy, language education, ESL education)
- Teacher education (elementary education, mathematics education, science education, social science education)

Information on admission appears at the beginning of the College of Education, Health, and Human Sciences section of this catalog.

REVISE THE DOCTOR OF PHILOSOPHY · EDUCATION MAJOR · EARLY CHILDHOOD EDUCATION; LITERACY, LANGUAGE, AND ESL EDUCATION; AND TEACHER EDUCATION CONCENTRATIONS

- On page 221-222 of the 2004-2005 Graduate Catalog revise to

Education Major—Early Childhood Education; Literacy, Language, and ESL Education; and Teacher Education Concentrations

Students in these three concentrations share a common set of course requirements with credits required as shown below. Doctoral committees may require students to take additional hours to fulfill degree requirements.

	Hours	Credit
*Research Area.....	15	
**Core Requirements.....	8	
Concentration/Specialization	15	
Cognate	6	
Dissertation	24	

Note: Please refer to the academic department for additional information on course requirements in each of these areas.

* Must include Theory and Practice in Teacher Education 640 (3)

** Seminar in Primary Concentration (3); Theory and Practice in Teacher Education 604, 605, 617.

COLLEGE OF EDUCATION, HEALTH AND HUMAN SCIENCES

REVISE CATALOG TEXT

- On page 180-182

Title II, HEA Compliance Report

Per requirements of Title II of the Higher Education Act, the College of Education, Health, and Human Sciences reports the following pass rates on State required licensure tests for the 2002-2003 Academic Year: the University of Tennessee 97%; State of Tennessee 95%.

GRADUATE PROGRAMS OF STUDY

Graduate study in the College of Education, Health, and Human Sciences prepares students for teaching, research, and public service in schools, colleges, universities, and agencies or managerial positions in government, business, and industry. The college offers programs leading to completion of the Master of Science degree, Specialist in Education degree, and Doctor of Philosophy degree. Additionally, the college makes available graduate certificate programs and various minors.

MINORS

Minors are available in gerontology through Health and Safety Programs and in nutrition through the Department of Nutrition.

GRADUATE CERTIFICATE PROGRAMS

Four certificate programs are available in the college. The certificate in urban education is available through the Department of Theory and Practice in Teacher Education. The Department of Consumer Services Management offers certificates in services management and tourism development. A certificate in applied epidemiology is offered by the Master of Public Health Program.

MASTER OF SCIENCE (MS)

- Child and family studies major with concentrations in child and family studies; early childhood education (Department of Child and Family Studies)
- College student personnel major (Department of Educational Psychology and Counseling)
- Consumer services management major with concentrations in hospitality and tourism management; retail and consumer sciences (Department of Consumer Services Management)
- Counseling major with concentrations in mental health counseling; rehabilitation counselor education; school counseling (Department of Educational Psychology and Counseling)
- Educational administration major (Department of Theory and Practice in Teacher Education)
- Educational psychology major with concentrations in adult education; applied educational psychology (Department of Educational Psychology and Counseling)
- Exercise science major with concentrations in exercise physiology; biomechanics/sports medicine (Department of Exercise, Sport, and Leisure Studies)
- Instructional technology and educational studies major with concentrations in cultural studies of educational foundations; curriculum; instructional technology (Department of Instructional Technology and Educational Studies)
- Nutrition major with concentrations in nutrition science; public health nutrition (Department of Nutrition)
- Recreation and leisure studies major with concentrations in recreation and leisure administration; therapeutic recreation (Department of Exercise, Sport, and Leisure Studies)
- Safety major with concentrations in emergency management; safety management (Health and Safety Programs)
- Sport studies major with concentrations in sport management; sport studies (Department of Exercise, Sport, and Leisure Studies)
- Teacher education major with concentrations in art education; early childhood special education; education of the deaf and hard of hearing; elementary education; elementary teaching; English education; foreign language/ ESL education; mathematics education; middle grades; modified and early childhood special education; reading education; science education; science education (environmental education); secondary teaching; social science education; special education; (Department of Theory and Practice in Teacher Education)

Refer to the specific department for information on the above majors.

MASTER OF PUBLIC HEALTH (MPH)

- The MPH is offered through the Health and Safety Programs.

SPECIALIST IN EDUCATION (EDS)

- Educational administration major (Department of Theory and Practice in Teacher Education)
- Instructional technology and educational studies major with concentrations in curriculum; instructional technology (Department of Instructional Technology and Educational Studies)
- School counseling major (Department of Educational Psychology and Counseling)
- School psychology major (Department of Educational Psychology and Counseling)
- Teacher education major with concentrations in elementary education; English education; foreign language/ESL education; mathematics education; reading education; science education; social science education; special education

Refer to the specific department for information on the above majors.

DOCTOR OF PHILOSOPHY (PhD)**Education Major**

- Counselor education concentration with specializations in career development; rehabilitation; group process (Department of Educational Psychology and Counseling)
- Cultural studies of educational foundations concentration with specializations in philosophy of education, cultural studies, sociology of education, and history of education (Department of Instructional Technology and Educational Studies)
- Curriculum, educational research, and evaluation concentration with specializations in curriculum, educational research, and evaluation; educational application of technology (Department of Instructional Technology and Educational Studies)
- Early childhood education concentration with specialization in early childhood special education (Department of Theory and Practice in Teacher Education)
- Educational administration and supervision concentration (Department of Theory and Practice in Teacher Education)
- Educational psychology concentration with specializations in adult education; applied educational psychology; collaborative learning (Department of Educational Psychology and Counseling)
- Exercise science concentration with specializations in biomechanics/sport medicine; exercise physiology; physical activity and population health (Department of Exercise, Sport, and Leisure Studies)
- Higher education administration (Department of Educational Psychology and Counseling)
- Instructional technology concentration (Department of Instructional Technology and Educational Studies)
- Literacy, language, and ESL education concentrations with specializations in literacy; language education; ESL education (Department of Theory and Practice in Teacher Education)
- School psychology concentration (Department of Educational Psychology and Counseling)
- Sport studies concentration (Department of Exercise, Sport, and Leisure Studies)

• Teacher education concentration with specializations in elementary education, mathematics education, science education, social science education (Department of Theory and Practice in Teacher Education)

Refer to the specific department for information on the above concentrations.

Application Process

Individuals seeking admission to the Doctor of Philosophy with a major in education must first be admissible to the University of Tennessee, Knoxville, (see the Graduate Studies: Admission Requirements section of this catalog) and then admitted to a concentration within the PhD with a major in Education. Prospective students are encouraged to make application at least six-months before anticipated matriculation or one year in advance for school psychology (i.e., Deadline: January 1.) An online application process is available at <http://www.cehhs.utk.edu/departments.html>.

Admission Criteria

Admission decisions for applicants to the PhD in Education are based on multiple criteria. Applicants are expected to present Verbal and Quantitative GRE scores equal to or higher than the 50th percentile, based on the norms in effect at the time the test was taken. An applicant with either a Verbal or Quantitative subtest score that is less than the 50th percentile will be expected to submit a proportionally higher, off-setting second subtest score (e.g., a Verbal subtest score at the 60th percentile may off-set a Quantitative subtest score at the 40th percentile). Current GRE Verbal and Quantitative interpretative data are available from Educational Testing Service at <http://www.ets.org>

Applicants are expected to earn a minimum score of 4.5 points on the Analytic Writing subtest (for score interpretation see: <http://www.gre.org/interpret.html>).

Applicants should be aware that departments and/or concentration areas may have GRE requirements which exceed those indicated above. Information regarding other admission criteria (e.g., GPA, letters of reference, writing samples, etc.), as well as GRE requirements for non-native English speaking applicants are available through the academic department in which the specific concentration is located (see previous section of catalog for concentration/department affiliation).

Residence Requirement

The residence requirement for students in the PhD with a major in education is two consecutive semesters of full-time enrollment.

Contact Information

Additional information on the PhD with a major in education is available in the academic department sections of this catalog, through the college's Student Services Center, Claxton Complex A332, or at <http://web.utk.edu/%7Ecehhsstu/>.

REVISE CATALOG

- On pages 13 and 14, revise the table of Graduate Degrees and Certificate Programs to reflect the changes within the college.

Department	Major	Degree	Concentrations Available
Educational Psychology and Counseling	College Student Personnel	MS	
	Counseling	MS	Mental Health Counseling Rehabilitation Counseling Education School Counseling
	Educational Psychology	MS	Adult Education Applied Educational Psychology
	School Counseling	EdS	
	School Psychology	EdS	
Health and Safety Programs	Public Health	MPH	Community Health Education Gerontology Health Planning/Administration Veterinary Public Health
		Dual MS-MPH program available (Nutrition/Public Health)	
		Graduate Certificate	Applied Epidemiology
	Safety	MS	Emergency Management Safety Management
Exercise, Sport, and Leisure Studies	Exercise Science	MS	Biomechanics/Sport Medicine Exercise Physiology

Department	Major	Degree	Concentrations Available
	Recreation and Leisure Studies	MS	Recreation and Leisure Admin Therapeutic Recreation
	Sport Studies	MS	Sport Management Sport Studies
Theory and Practice in Teacher Education	Educational Administration	MS EdS	
	Teacher Education	MS	Track I: Art Education Early Childhood Special Education Elementary Education English Education Foreign Language/ESL Education Mathematics Education Reading Education Science Education Science Education (Environmental Education) Social Science Education Special Education Track II: Art Education Education of the Deaf and Hard of Hearing Elementary Teaching Middle Grades Modified and Early Childhood Special Education
		EdS	Elementary Education English Education Foreign Language/ESL Education Mathematics Education Reading Education Science Education Social Science Education Special Education
Interdepartmental	Education	PHD	Counselor Education Cultural Studies of Educational Foundations Curriculum, Educational Research, and Evaluation Early Childhood Education Educational Administration and Supervision Educational Psychology Exercise Science Higher Education Administration Instructional Technology Literacy, Language, and ESL Education School Psychology Sport Studies Teacher Education

COLLEGE OF ENGINEERING

ALL CHANGES EFFECTIVE: FALL 2005

II. Program Changes

ADD DUAL MS-MBA PROGRAM IN AEROSPACE ENGINEERING, BIOMEDICAL ENGINEERING, CHEMICAL ENGINEERING, ELECTRICAL ENGINEERING, COMPUTER ENGINEERING, AND MATERIALS SCIENCE AND ENGINEERING

- On page 227 add catalog text for the Dual MS-MBA (immediately before "Graduate Program at the UT Space Institute" and equivalent to the College of Business statement on page 149 of Graduate Catalog)

DUAL MS-MBA

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 operation management) and the Master of Science degree in one of the following engineering majors: Aerospace, Biomedical, Chemical, Computer, Electrical, Engineering Science, Industrial, Materials Science, Mechanical, and Nuclear Engineering. (refer to each major for specific information and requirements).

The establishment of the dual program addresses the critical need for personnel trained in both engineering and management who can integrate an increasingly complex body of knowledge for rapid introduction of new products to the marketplace. The objective of the dual degree program is to prepare graduates to take a leading management role in companies that must react quickly to a dynamic market where forces of competition require rapid changes via short cycles in design, manufacturing, and product development. Since the development of a commercial product is a central part of the program, this program is also for students who wish to become an entrepreneur.

ADMISSION

Applications are accepted for fall semester only. Applicants for the MS-MBA program must make separate application to, and be competitively and independently accepted by, the Office of Graduate Admissions for the Master of Business Administration degree program and the office of Associate Dean for Student Affairs at the College of Engineering.

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 the MS with a major in one of engineering majors 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 U.S. citizens and permanent residents received after the MBA application deadline (March 1) will be considered as space allows. Additional information is required and different application dates are established by the Office of Graduate Admissions for international students.

REQUIREMENTS

All engineering students enrolled in the program must complete common coursework designed to provide them with an integrated, multidisciplinary teamwork experience. The MBA curriculum in product development and manufacturing consists of 30 hours of common course work in the College of Business Administration and 12 hours of common coursework in the College of Engineering. Engineering common coursework includes a culminating three-hour integrated project course requiring a comprehensive report, and a final examination as required by the Dual Program Committee, to be taken during the first session of 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.

The dual degree candidate must satisfy the curriculum and graduation requirements of the engineering major 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.

Approval Dual Credit

A maximum of 15 semester hours of the Engineering courses may be counted toward the MBA degree program.

REVISE COLLEGE REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY DEGREE

This proposal is an exception to the requirement on page 34 of the Graduate Catalog under "Program of Study."

- On page 227 of the 2004-2005 Graduate Catalog, insert the following text immediately before the Graduate Program at the UT Space Institute text.

College Requirements for the Doctor Of Philosophy Degree

Detailed minimum university requirements for the various doctoral degrees are listed on pages 34-36 of this catalog. Most departments have additional specific requirements listed in their portion of the catalog listings. The College of Engineering has the following specific requirements that must be met for all doctoral degree programs in the college.

- A minimum of 72 hours of graduate credit (coursework plus research and dissertation)
- A minimum of 24 hours Doctoral Research and Dissertation
- A minimum of 36 hours of graduate coursework hours. Departments, programs and/or dissertation committees may impose a higher minimum.

DEPARTMENT OF CHEMICAL ENGINEERING**I. Course Changes****Chemical Engineering (226)**

ADD CROSS-LISTED SECONDARY COURSE

509 Multidisciplinary Project (1) (*See Industrial Engineering 509.*)

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

REVISE DESCRIPTION

575 Applied Microbiology and Bioengineering (3) Cross-disciplinary course combining basic concepts in microbiology, biochemistry, reaction kinetics, and biochemical and environmental engineering. Commercial processes, biodegradations/wastewater treatment, analysis of basic bioreactor systems, biosensors, and immobilization methods. (*Same as Environmental Engineering 575; Biosystems Engineering 575; Microbiology 575.*)

581 Green Engineering (3) Principles and practical aspects of the design, commercialization, and use of processes and products that are feasible and economical while minimizing the generation of pollution at the source and risk to human health and environment. Prereq: Graduate standing in engineering or consent of instructor. (*Same as Environmental Engineering 581; Engineering Science 585.*)

REVISE TITLE OF SECONDARY CROSS-LISTED COURSE

484 Introduction To Maintainability Engineering (3) (*See Nuclear Engineering 484.*)

DROP

485 Hydrocarbon Processing (3)

II. Program Changes

REVISE REQUIREMENTS FOR THE MS AND PHD IN CHEMICAL ENGINEERING
(CORE COURSE REQUIREMENTS, REDUCE COURSEWORK HOURS FOR PHD)

- On page 228 of the 2004-2005 Graduate Catalog, replace Master of Science and Doctor of Philosophy sections with the following:

CORE GRADUATE CLASSES IN CHEMICAL ENGINEERING

A graduate degree in chemical engineering requires the mastery of the core fundamentals of the discipline. These fundamentals are represented by five core courses: 505, 531, 547, 548, and 551. Both the master's (thesis and non-thesis) and doctoral degrees in chemical engineering require the successful completion of these core courses.

ADDITIONAL COURSEWORK

In addition to the core classes, supplementary coursework appropriate for each graduate degree will be needed. The coursework beyond the core courses is determined in consultation with the student's advisor and dissertation or thesis committee and must be approved by the committee and the department head.

MASTER OF SCIENCE
Chemical Engineering Major**REQUIREMENTS****Thesis Option**

The standard master's program includes a thesis and leads to the Master of Science. Minimum departmental requirements are as follows:

- A total of at least 21 semester hours in graduate level courses (excluding 500 and 501) in chemical engineering and related areas beyond the baccalaureate. These courses must include the five core courses (see above).
- Research and a thesis to give at least 9 hours of credit in 500.
- Active participation in graduate seminars in the department. Resident students must register for 501 every semester it is offered.
- A final oral examination covering the thesis and related fields and graduate coursework.

Non-Thesis Option

Under certain conditions, a candidate may apply for a non-thesis program. To be eligible, a candidate must show evidence of significant professional experience after the baccalaureate degree; at least five years of industrial experience or research publications would be examples of such evidence. The departmental faculty will consider each application individually. Upon acceptance, the requirements for completion of the non-thesis option are as follows:

- A total of at least 33 hours in graduate courses in chemical engineering and related areas beyond the baccalaureate. These courses must include the 5 core courses (see above).
- Completion of a critical review of the literature and other sources in an area related to chemical engineering (Chemical Engineering 580).
- A written comprehensive examination over the major field and an oral examination covering the review paper and related areas.

DOCTOR OF PHILOSOPHY
Chemical Engineering Major**REQUIREMENTS**

Students may apply directly to the PhD program either with or without having completed a master's thesis. Students proceeding directly to the PhD program from a baccalaureate degree should submit evidence of outstanding performance in a rigorous undergraduate program and the ability to perform independent research at the doctoral level.

A total of 72 credit hours beyond the bachelor's degree are required for the PhD degree. These consist of coursework hours and research and dissertation credit hours (Chemical Engineering 600). Specifically, the department requirements consist of the satisfactory completion of:

A minimum of 36 semester hours in graduate level courses (excluding 600) in chemical engineering and related fields beyond the baccalaureate. These courses must include the five core courses (see above) and at least 6 hours of courses at the 600 level from the University of Tennessee, Knoxville.

The comprehensive examination, consisting of a written part and an oral part. The written part covers the core fundamentals of the program. The defense of the dissertation proposal constitutes the oral portion of the exam. A minimum of 24 credit hours of research and dissertation credit in Chemical Engineering 600. Registration must be continuous from the time research begins (see the Continuous Registration requirement in the Graduate Program Requirements).

Successful oral defense of the dissertation before the student's dissertation committee.

Active participation in graduate seminars conducted by the department. Resident students must register for 501 every semester offered.

ADD DUAL MS-MBA DEGREE IN CHEMICAL ENGINEERING

- On page 228 of the 2004-2005 Graduate Catalog, add the following just before the description of the Graduate Certificate in Maintenance and Reliability Engineering:

Curriculum For Dual MS-MBA
Chemical Engineering Major**August—First Year**

Business Administration 511 MBA Core I 3

Fall—First Year

Business Administration 512 MBA Core II 15

Mechanical Engineering 504 1

Spring

Business Administration 513 MBA Core III 9

Mechanical Engineering 506	2
Mechanical Engineering 508	3
Summer	
— Internship	—
Chemical Engineering 509	1
Fall—Second Year	
Chemical Engineering 509	1
— Departmental/Engineering Courses*	9
Spring	
— MBA Hub Course Elective	3
Chemical Engineering 509	1
— Departmental/Engineering Courses*	9
Summer (first session)	
Chemical Engineering 594	3
<hr/>	
Total 60	

*The departmental courses include the 5 required departmental core courses.

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

I. Course Changes

Civil Engineering (254)

ADD

525 Pavement Materials Characterization (3) Material modeling, laboratory and in-situ characterization of unbound granular, stabilized base, hot-mix asphalt mixtures, Portland cement concrete, and other paving materials; performance prediction for flexible and rigid pavements. Prerequisite: 321, 330.

DROP

421 Portland Cement Concrete Mix Design and Analysis (3)
534 Geological Engineering (3)

REVISE COURSE TITLE AND DESCRIPTION

522 Mix Design for Asphaltic and Portland-Cement Concrete (3) Aggregate properties and tests, asphalt binder properties and tests, mix design methods for asphaltic mixtures, hot-mix asphalt (HMA) mixture production and construction, Portland-cement concrete (PCC) mix design, additives and admixtures for PCC, special types of PCC, PCC production and construction. Prerequisite: 321.

REVISE CREDIT HOURS

590 Special Problems in Civil Engineering (3)

REVISE PREREQUISITE

451 Highway Engineering (3) Prereq: 352
452 Traffic Engineering (3) Prereq: 352
453 Airport/Railroad Planning and Design (3) Prereq: 352

REVISE CROSS-LISTING TO PRIMARY COURSE

558 Planning and Transportation (3) (*Same as Political Science 555.*)

Environmental Engineering (344)

REVISE CREDIT HOURS

590 Special Problems in Environmental Engineering (3)

REVISE PREREQUISITE

530 Urban Hydrology and Stormwater Engineering (3) Prereq: Civil Engineering 395 or 416

REVISE GRADING

508 Seminar (1) Satisfactory/No Credit grading only.

II. Program Changes

REVISE MS IN CIVIL ENGINEERING TO ADD A NON-THESIS COURSEWORK ONLY OPTION.

REVISE MS IN ENVIRONMENTAL ENGINEERING TO ADD A NON-THESIS COURSEWORK ONLY OPTION.

REVISE PREREQUISITES TO THE MS PROGRAM IN ENVIRONMENTAL ENGINEERING

- On page 230 of the 2004-2005 Graduate Catalog, change the description of master's program to:

MASTER OF SCIENCE

The Master of Science programs in civil engineering and environmental engineering are offered to graduates of recognized undergraduate curricula. Both degree programs have thesis and non-thesis options. It is the policy of the department that students supported by university-related financial aid complete an integrated project, which is defined as a Thesis (Civil Engineering/Environmental Engineering 500) or Special Problem (Civil Engineering/Environmental Engineering 590). The appointment letter may specify which of the two options must be selected.

Civil Engineering Major

Departmental requirements provide that for a major in civil engineering, the bachelor's degree must be in civil engineering, or certain undergraduate prerequisite courses must be taken before Admission to Candidacy. The Department of Civil and Environmental Engineering offers both thesis and non-thesis options for the Master of Science with a major in civil engineering. Either option must be approved by the student's major professor.

Thesis Option

A minimum of 30 semester hours of approved graduate courses, including 6 hours of thesis, is required.

Non-Thesis Option

A minimum of 33 semester hours of approved graduate courses, is required, which may include a 3-hour special problems course to be completed under the direction of the student's major professor.

Environmental Engineering Major

For a 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 395 or 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.

Thesis Option

A minimum of 30 semester hours of approved graduate courses, including 6 hours of thesis and a minimum of 15 semester hours of approved environmental engineering coursework, 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, which may include a 3-hour special problems course to be completed under the direction of the student's major professor. The major shall include a minimum of 18 semester hours of approved environmental engineering coursework including a minimum of 9 semester hours of advanced engineering design courses selected from a list provided by the student's committee. A minor may be selected but is not necessarily required.

REVISE PHD CIVIL ENGINEERING MAJOR TO REDUCE THE REQUIRED COURSE WORK TOTAL TO 36 HOURS.

- On page 230 of the 2004-2005 Graduate Catalog, revise catalog text:

DOCTOR OF PHILOSOPHY**Civil Engineering Major**

A graduate program leading to the Doctor of Philosophy is offered with a major in civil engineering. Specific departmental requirements for the PhD include the following:

- A minimum of 72 semester hours beyond the bachelor's degree, exclusive of credit for the MS thesis. Of this number, a minimum of 24 semester hours in 600 Doctoral Research and Dissertation will be required. It is expected that the research work will be in journal publication form prior to approval of the dissertation.
- A minimum of 18 semester hours of graduate courses in civil engineering or environmental engineering, exclusive of thesis or dissertation credit, at least 6 hours of which must be 600-level courses.
- Additional coursework in civil engineering, environmental engineering, or related scientific and engineering fields, amounting to a minimum of 18 semester hours, subject to approval by the student's faculty committee. These related fields will normally include such disciplines as mechanics, chemistry, mathematics, microbiology, physics, and other engineering fields. A minimum of 6 semester hours of mathematics will be required beyond the civil engineering undergraduate requirements.
- At the discretion of the student's dissertation committee and depending on the student's background, more than 36 hours of courses may be required.
- A maximum of 24 course credits from the master's degree may be used to satisfy the course requirements for the PhD.
- One foreign language if the student's faculty committee feels that a reading knowledge of a foreign language is crucial to the student's research efforts.
- Upon completion of at least one-half of all coursework, each student must pass a comprehensive examination.
- After completion of the dissertation, prior to graduation, each student must pass a dissertation defense examination administered by a faculty committee.

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING**I. Course Changes****Electrical And Computer Engineering (319)**

REVISE COURSE DESCRIPTION AND PREREQUISITES

400 Senior Design (5) A major design project that focuses the student's attention on professional practice, accumulated background of curricular components, and recent developments in the field. This major design emphasis is directed to topics within the field of electrical engineering. Includes Level 3 design projects which require laboratory work. Prereq: 316, 335, 342, 355.

REVISE CREDIT HOURS

415 Automatic Control Systems (3)

REVISE COURSE DESCRIPTION AND CREDIT HOURS

416 Computer Control Systems (3) Computer controlled systems using state variables and z-transform model representations with sampling theory and its effect of digital control design. Design of digital controllers in both the state space and frequency domains. Includes Level 1 design projects. Prereq: 316.

422 Power System Operations and Planning (3) Dynamic phenomena in power systems. Transient stability assessment and enhancement; direct and indirect methods for stability determination in nonlinear systems. Operations planning, unit commitment, economic dispatch, frequency regulation and automatic generation control. Volt-var control, load management, cogeneration and other topics of contemporary concern. Includes Level 1 design projects. Prereq: 421.

432 Electronic Amplifiers (3) Feedback amplifier principles; wideband linear amplifier design; low-noise preamplifier design; audio power amplifier design. Introduction to radio-frequency amplifier design; oscillator principles. Includes laboratory experiments and design projects. Includes Level 2 design projects which require laboratory work. Prereq: 431.

442 Communication System Design (3) Application of communication theory to system design. Hardware and software design and simulation. Modern communication topics. Includes Level 1 design projects. Prereq: 441.

453 Introduction to Computer Networks (3) Principles of computer networking and software design of network protocol with an emphasis on the internet and TCP/IP protocol suite. Includes Level 1 design projects. Prereq: 206.

472 Introduction to Digital Image Processing (3) Basic methods for digitizing, storing, processing, and displaying images. Computational procedures for image enhancement, restoration, coding, and segmentation. Includes Level 1 design projects. Prereq: 316. Non-majors require consent of instructor.

482 Power Electronic Circuits (3) Voltage-fed inverters, PWM principles, control of inverters, dc-dc converters, dc machine drives, resonance converters, step motor drives, brushless dc machine principles. Includes Level 1 design projects. Prereq: 481.

REVISE PREREQUISITES

481 Power Electronics (3) Prereq: 316, 325, 336.

ADD

525 Alternative Energy Sources (3) Energy outlook, interconnection issues of distributed energy resources, efficiency of power production, electric energy conversion and storage. Photovoltaics, fuel cells, wind turbines, microturbines.

542 Communication Systems Simulation (3) Simulation is used as a design and performance evaluation tool for communication systems. Simulation models for stochastic signals and system components including decoders, modulators, non-linear power amplifiers, bit and carrier synchronizers, equalizers and receivers are discussed along with the error effects resulting from the use of these models. Techniques for modeling time-varying and nonlinear systems are included. Monte Carlo techniques, semi-analytic techniques and variance reduction methods are covered.

613 Nonlinear Systems Theory (3) Introduction to nonlinear systems theory with applications to control systems. Specific emphasis is given to Lyapunov Theory, Adaptive Control, Feedback Linearization and Sliding Mode Control. Prereq: 511 or equivalent.

625 Utility Applications of Power Electronics (3) Electric power quality, harmonics, voltage sag, reactive power compensation, transient stability. Structure and control of power converters, multilevel converters, active power filters, static series and shunt compensators, FACTS, HVDC. Prereq: 521 and 523 or consent of instructor.

626 Solid State Power Semiconductors (3) Semiconductor physics and circuit models. Power diodes, power MOSFETs, thyristors, GTO thyristors, IGBTs, emerging devices and circuits. Wide band gap power semiconductors. Solar cell device physics. Prereq: 523 or consent of instructor.

629 Traction Drives (3) Operating principles of traction drives for electric and hybrid electric vehicles. Low speed constant torque control mode and high speed constant power control mode. Ideal performance of the doubly fed, separately excited dc machine and the wound rotor synchronous machine. High CPSR drives based on singly-fed machines including the induction, permanent magnet synchronous, brushless dc and switched reluctance motors. Other contemporary topics in traction drive applications. Prereq: 523 or consent of instructor.

653 Advanced Computer Networks (3) Topics of current interest to students and faculty: high-speed Internet switch/router architectures, routing algorithms and protocols, network performance analysis and packet scheduling algorithms. Coursework will include theoretical as well as practical (simulation-based) assignments. Prereq: 553 and consent of instructor.

ADD SECONDARY CROSS-LISTED COURSE

509 Multidisciplinary Project (1) (*See Industrial Engineering 509.*)

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

DROP

515 Adaptive Control and System Identification (3)

518 Control Systems Design I (3)

519 Control Systems Design II (3)

524 High Voltage Systems (3)

581 Quantum Electronics I (3)

582 Quantum Electronics II (3)

624 Electrical Insulation (3)

REVISE PREREQUISITE AND REPEATABILITY

617 Special Topics in Systems Theory I (3) Topics of current interest to students and faculty: large scale systems, model order reduction, algebraic and geometric system theories, and advance design methods. Prereq: 511 and consent of instructor. May be repeated. Maximum 6 hours.

618 Special Topics in Systems Theory II (3) Topics of current interest to students and faculty: large scale systems, model order reduction, algebraic and geometric system theories, and advanced design methods. Prereq: 617 and consent of instructor. May be repeated. Maximum 6 hours.

II. Program Changes**DUAL MS-MBA**

This new dual degree program should be inserted in the description of the departmental graduate programs that were approved by the Graduate Council Curriculum Committee on Oct. 7, 2004. This new description has not yet appeared in a catalog. The desired addition for the dual MS-MBA degree should be placed immediately ahead of the "DOCTOR OF PHILOSOPHY" section; in the 2004-2005 Graduate Catalog the insertion point would be on page 234. The program is described (along with admissions, requirements, and approved dual credits) in the introduction to the college. The curriculum is as follows:

Curriculum For Dual MS-MBA**Computer Engineering Major • Electrical Engineering Major****August—First Year**

Business Administration 511 MBA Core I..... 3

Fall—First Year

Business Administration 512 MBA Core II..... 15

Mechanical Engineering 504..... 1

Spring

Business Administration 513 MBA Core III..... 9

Mechanical Engineering 506..... 2

Mechanical Engineering 508..... 3

Summer

— Internship..... —

Electrical and Computer Engineering 509 1

Fall—Second Year

Electrical and Computer Engineering 1

— Departmental/Engineering Courses 9

Spring

— MBA Hub Course Elective..... 3

Electrical and Computer Engineering 509 1

— Departmental/Engineering Courses 9

Electrical and Computer Engineering 594 3

Total 60

DEPARTMENT OF INDUSTRIAL AND INFORMATION ENGINEERING**I. Course Changes****Industrial Engineering (556)**

REVISE CREDIT LEVEL (ADD GRADUATE CREDIT)

427 Introduction to Lean Systems (3) Introduces a framework to implement improvements within an enterprise. This framework will focus on designing both the physical system and the associated information system. The students will be introduced to the basic concepts of facilities design based upon process design and requirements. The design of the physical and information systems will be based on integrating the concepts, terminology, and tools of lean enterprise and Six Sigma. Activities will include case studies, industry based projects, and the preparation of written engineering reports. Prereq: Senior standing in major or consent of instructor. Coreq: 306, 402

ADD

550 Graduate Seminar (1) A seminar to guide and familiarize graduate students of engineering to the process of thesis and/or dissertation research. This includes selection of committee members, research management and guidelines, basics of data analysis and presentation, and guidelines for writing grant and research proposals. Prereq: Admission to graduate program. Satisfactory/No Credit grading.

554 Advanced Development of Information Systems (3)

Presents algorithms commonly needed to implement advanced information systems. Different types of data structures are presented in an attempt to find the model that best suits a given problem. Includes in-depth discussion of Visual Basic modules. Involves the transformation of problems into programming paradigms, and encodes solutions using the Microsoft Visual Basic 6 rapid application development tool. Activities will include case studies and demonstrations to supplement lectures. Practical problems and projects will be assigned. Prereq: 514 or consent of instructor.

556 Data Mining in Engineering and Manufacturing (3) This course will include the following components: the process of knowledge discovery; popular data mining tools such as classification, regression, and clustering; advanced data mining techniques; application of data mining in manufacturing, engineering design, and security; and research project. Prereq: 516 or equivalent course.

DROP

403 Production Facilities Design and Material Handling (3)

REVISE DESCRIPTION

421 Information Systems Analysis and Design (3) Systems engineering approach to analysis and design of systems of information. Topics include: system development life cycle, system analysis methodologies, data analysis techniques, system design, joint application design, and rapid application design. Lab introduces analysis and design software tools. Prereq: Senior standing or consent of instructor.

REVISE PRIMARY TO ADD SECONDARY CROSS-LISTINGS FOR AEROSPACE ENGINEERING 509, BIOMEDICAL ENGINEERING 509, CHEMICAL ENGINEERING 509, ELECTRICAL AND COMPUTER ENGINEERING 509, AND MATERIALS SCIENCE ENGINEERING 509.

509 Multidisciplinary Project (1) Venue for multidisciplinary student teams to coordinate design and manufacturing tasks of product to be developed. Project management (budget and schedule), assignment of tasks for team members, and concurrent design and manufacturing. Design concepts and product feature reviewed by potential customers/investors. Prereq: Consent of instructor. May be repeated. Maximum 3 hours. (*Same as Aerospace Engineering 509; Biomedical Engineering 509; Chemical Engineering 509; Electrical and Computer Engineering 509; Materials Science Engineering 509; Mechanical Engineering 509; Nuclear Engineering 509.*)

REVISE COURSE DESCRIPTION AND PREREQUISITE

455 Human-Computer Interaction (3) Introduction to the analysis, design, production, and implementation of systems requiring interaction between humans and computers (HCI). Includes human sensory systems, human memory capacity, computer hardware/software requirements, input/output device design, and error message handling. Prereq: Junior standing in major and computer programming skills; or consent of instructor.

REVISE TITLE OF SECONDARY CROSS-LISTED COURSE

484 Introduction to Maintainability Engineering (3) (*See Nuclear Engineering 484.*)

II. Program Changes

REVISE DUAL MS-MBA FOR INDUSTRIAL ENGINEERING

- On page 238 - 239 of the 2004 – 2005 Graduate Catalog, drop the entire section of DUAL MS-MBA and replace with

DUAL MS-MBA

Curriculum For Dual MS-MBA

Industrial Engineering Major • Manufacturing Systems Engineering Or Product Development And Manufacturing August—First Year

Business Administration 511 MBA Core I 3

Fall—First Year

Business Administration 512 MBA Core II 15

Industrial Engineering 504 1

Spring

Business Administration 513 MBA Core III 9

Industrial Engineering 506 2

Industrial Engineering 508 3

Summer

Internship —

Industrial Engineering 509 1

Fall—Second Year

Industrial Engineering 509 1

Industrial Engineering Core Courses 9

Spring

MBA Hub Course Elective 3

Industrial Engineering 509 1

Industrial Engineering Concentration Courses 9

Summer (first session)

Industrial Engineering 594 3

Total 60

ADD GRADUATE CERTIFICATE PROGRAM IN ENGINEERING MANAGEMENT

- On page 239 of the 2004 – 2005 Graduate Catalog, add the following before “Graduate Certificate in Maintenance and Reliability Engineering.”

Graduate Certificate in Engineering Management

The Industrial and Information Engineering Department of the College of Engineering offers a graduate certificate in engineering management. The program is designed for professionals who work in an engineering organization and are interested in improving their technical management skills and knowledge. The program consists of four graduate courses that are available through distance education.

The 12-semester hour graduate certificate is earned by completing the following four regularly offered courses: Engineering Management 533, 534, 536, 539.

Graduate credit will be awarded for any course successfully completed with an average of B or better. The credits may be utilized toward a graduate degree later if the student meets all other degree requirements.

Applicants must meet the minimum admission requirements and be admitted to the University of Tennessee, Knoxville Graduate School. The only academic prerequisite for the certificate program is a bachelor's degree from a recognized university or college.

DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

I. Course Changes

Materials Science And Engineering (638)

ADD CROSS-LISTED SECONDARY COURSE

509 Multidisciplinary Project (1) (*Same as Industrial Engineering 509.*)

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

REVISE TITLE OF SECONDARY CROSS-LISTED COURSE

484 Introduction to Maintainability Engineering (3) *(See Nuclear Engineering 484.)*

DROP

443 Polymer Processing (3)

444 Plastic Fabrication and Design (3)

II. Program Changes

CHANGE REGISTRATION REQUIREMENTS FOR DEPARTMENTAL SEMINAR

- p. 242, right hand column near middle, revise text to:

All resident students are required to participate in the graduate seminar in materials science and engineering or polymer engineering, as appropriate, during each semester in which it is offered. Three hours of Materials Science and Engineering 503 or 504 may be counted toward degree requirements.

REVISE REQUIREMENTS FOR NON-THESIS MS STUDENTS (REQUIRING MATERIALS SCIENCE AND ENGINEERING 580 AND INCLUDE THE COMPREHENSIVE EXAMINATION IN THAT COURSE)

- p. 242, right hand column near bottom, revise text as follows:
- Satisfactory completion of 580 (Critical Review) as a culminating experience. This course shall include a comprehensive examination administered by the faculty committee.

REVISE COURSEWORK REQUIREMENTS FOR THE PHD IN MATERIALS SCIENCE AND ENGINEERING (REDUCTON OF MINIMUM COURSEWORK HOURS)

- On page 242, right hand column near bottom continuing onto p. 243, revise text as follows:

REQUIREMENTS

Departmental requirements for completion of the doctoral degree are:

- For students proceeding directly to the PhD from the baccalaureate degree, a minimum of 72 graduate credit hours is required. These hours must include 42 graduate course credit hours with at least six hours of 600-level courses and 30 hours of dissertation. Six hours of Materials Science and Engineering 503 or 504 may be counted toward degree requirements. At least 24 credit hours must be courses taught in the department. The materials science and engineering major and the polymer engineering major must include the courses required for the master's program. In addition, for students in the textile science concentration of the polymer engineering major, the courses must include 541 and 543.
- For students having a thesis-based master's degree from UT in materials science and engineering or polymer engineering, or a master's degree from another university in materials science and engineering, polymer engineering, or metallurgical engineering, a minimum of 48 graduate credit hours is required. These hours must include 18 graduate course credit hours with at least six hours of 600-level courses and 30 hours of dissertation. Three hours of Materials Science and Engineering 503 or 504 may be counted toward degree requirements. At least 12 credit hours must be courses in the department.
- For students having a non-thesis master's degree from UT in materials science and engineering or polymer engineering, a minimum of 48 graduate credit hours is required. These must include 15 graduate course credit hours with at least six hours of 600-level courses and 33 hours of dissertation. Three hours of Materials Science and Engineering 503 or 504 may be counted toward degree requirements. At least 12 credit hours must be courses in the department.

REVISE REGISTRATION REQUIREMENTS FOR THE DEPARTMENTAL SEMINAR

- p. 243, left hand column near middle, revise text as follows:
- Active participation in graduate seminars conducted by the department.

ADD DUAL MS-MBA IN MATERIALS SCIENCE AND ENGINEERING

- On page 242 of the 2004-2005 graduate catalog, before Doctor of Philosophy insert:

Curriculum For Dual MS-MBA**Material Science and Engineering Major****August—First Year**

Business Administration 511 MBA Core I 3

Fall—First Year

Business Administration 512 MBA Core II 15

¹Mechanical Engineering 504 1**Spring**

Business Administration 513 MBA Core III 9

¹Mechanical Engineering 506 2¹Mechanical Engineering 508 3**Summer**

— Internship —

Materials Science and Engineering 509 1

Fall—Second Year

Materials Science and Engineering 509 1

— ²Departmental/Engineering Courses 9**Spring**

— MBA Hub Course Elective 3

Materials Science and Engineering 509 1

— ²Departmental/Engineering Courses 9³Materials Science and Engineering 594 3

Total 60

¹Approved related-area courses for the MSE non-thesis Masters of Science requirements²Departmental/Engineering Courses must fulfill MSE non-thesis Masters of Science requirements³MSE 594 is an approved substitute for MSE 580 for the dual degree program**DEPARTMENT OF MECHANICAL, AEROSPACE, AND BIOMEDICAL ENGINEERING****I. Course Changes****Aerospace Engineering (018)**

REVISE DESCRIPTION AND CREDIT HOURS

425 Propulsion (4) Principles of propulsion devices, principally jet and rocket engines. Combustion and equilibrium, inlets, nozzles, compressors, pumps and turbines. Overall performance evaluations. Prereq: 351.

REVISE DESCRIPTION, CREDIT HOURS, COREQ

424 Astronautics (4) Solar system, orbital mechanics, propulsion, atmospheric entry including thermal protection materials, human factors in space flight, the space environment, and current topics. Prereq: 351. Coreq: Mechanical Engineering 331.

REVISE CREDIT HOURS

429 Aerospace System Design (3)

ADD CROSS-LISTED SECONDARY COURSE

509 Multidisciplinary Project (1) (See *Industrial Engineering 509*.)**Biomedical Engineering (192)**

ADD CROSS-LISTED SECONDARY COURSE

509 Multidisciplinary Project (1) (See *Industrial Engineering 509*.)

REVISE CREDIT HOURS

430 Biomedical Engineering Laboratory (4)

DROP

435 Bioinstrumentation (3)

Mechanical Engineering (650)

ADD

519 Technology Product Development and Entrepreneurship (3) Technology and innovation, technology transfer, patent protection, legal formation and intellectual property, knowledge management, generation, and transmission, launching a technology based business, sources of capital, small business growth and operation. Multidisciplinary teams will develop a business based on a technological product. Prereq: 506 or consent of instructor.

547 Advanced Linear Control (3) Multivariable feedback systems; transfer function and state-space techniques; stability of linear systems; optimality and robustness; control system design. Prereq: 507 or equivalent

567 Smart Structures and Materials (3) Constitutive modeling and characteristics of piezoelectric materials, electrostrictive materials, magnetostrictive materials, shape memory alloys, electrorheological and magnetorheological fluids, and electroactive polymers. Energy methods for static and dynamic analysis of piezoelectric bimorph and other smart systems. Prereq: 321, 363 or consent of instructor.

647 Nonlinear Control Systems (3) Qualitative behavior of nonlinear systems; Lyapunov stability theory; passivity and absolute stability theory; frequency domain methods; nonlinear feedback systems; nonlinear design techniques. Prereq: 547 or Electrical and Computer Engineering 512 or equivalent.

REVISE CROSS-LISTING TO ADD CHEMICAL ENGINEERING

594 Culminating Integrated Project Report (3) *(Same as Chemical Engineering 594; Industrial Engineering 594; Materials Science and Engineering 594; Nuclear Engineering 594.)*

REVISE TITLE, DESCRIPTION AND PREREQUISITES

451 Control Systems (3) Analysis and design of feedback control systems using transient and frequency response techniques, stability analysis in the time and frequency domain. Prereq: 363.

REVISE DESCRIPTION AND PREREQUISITES

475 Thermal Engineering (3) Thermal systems with emphasis on turbomachinery, heat exchangers, gas-vapor mixtures and psychrometry, fuels and combustion; chemical equilibrium; system analysis and design. Prereq: 344.

REVISE PREREQUISITE

449 Mechanical Engineering Laboratory (3) Prereq: 344, 345. Coreq: 475.

DROP

455 Introduction to Machine Design (2)

456 Introduction to Thermal Design (2)

469 Machine Design (4)

479 Thermal Engineering Design (4)

II. Program Changes

ADD DUAL MS-MBA DEGREE IN AEROSPACE ENGINEERING, BIOMEDICAL ENGINEERING

- On page 246 of the 2004-2005 Graduate Catalog revise catalog text:

DUAL MS-MBA

Curriculum for Dual MS-MBA Degree •

Aerospace Engineering Major

August—First Year

Business Administration 511 MBA Core I 3

Fall—First Year

Business Administration 512 MBA Core II 15

Mechanical Engineering 504 1

Spring

Business Administration 513 MBA Core III 9

Mechanical Engineering 506 2

Mechanical Engineering 508 3

Summer

— Internship —

Aerospace Engineering 509 1

Fall—Second Year

Aerospace Engineering 509 1

—Departmental/ Engineering Courses 9

Spring

— MBA Hub Course Elective 3

Mechanical Engineering 509 1

—Departmental/ Engineering Courses 9

Summer (first session)

Mechanical Engineering 594 3

Total 60

Curriculum for Dual MS-MBA Degree •

Biomedical Engineering Major

August—First Year

Business Administration 511 MBA Core I 3

Fall—First Year

Business Administration 512 MBA Core II 15

Mechanical Engineering 504 1

Spring

Business Administration 513 MBA Core III 9

Mechanical Engineering 506 2

Mechanical Engineering 508 3

Summer

— Internship —

Biomedical Engineering 509 1

Fall—Second Year

Biomedical Engineering 509 1

—Departmental/ Engineering Courses 9

Spring

— MBA Hub Course Elective 3

Mechanical Engineering 509 1

—Departmental/ Engineering Courses 9

Summer (first session)

Mechanical Engineering 594 3

Total 60

REVISE REQUIREMENTS FOR DUAL MS-MBA - MECHANICAL ENGINEERING MAJOR

Curriculum for Dual MS-MBA Degree •**Mechanical Engineering Major****August—First Year**

Business Administration 511 MBA Core I 3

Fall—First Year

Business Administration 512 MBA Core II..... 15

Mechanical Engineering 504 1

Spring

Business Administration 513 MBA Core III 9

Mechanical Engineering 506 2

Mechanical Engineering 508 3

Summer

—Internship —

Mechanical Engineering 509 1

Fall—Second Year

Mechanical Engineering 509 1

Mechanical Engineering 551 3

Mechanical Engineering 537 3

Mechanical Engineering 527 3

Spring

—MBA Hub Course Elective 3

Mechanical Engineering 505 3

Mechanical Engineering 509 1

Mechanical Engineering 510 3

—Math/Engineering Elective (select with advisor)..... 3

Summer (first session)

Mechanical Engineering 594 3

Total 60

REVISE REQUIREMENTS FOR DUAL MS-MBA - ENGINEERING SCIENCE MAJOR

Dual degree candidates enrolled in engineering science are required to take 18 hours of graduate level engineering courses during the second year of the program. This program requires a coursework plan, approved by the Dual Program Committee, including a concentration such that the student can accomplish his/her teamwork assignments.

Curriculum for Dual MS-MBA Degree •**Engineering Science Major****August—First Year**

Business Administration 511 MBA Core I 3

Fall—First Year

Business Administration 512 MBA Core II..... 15

Mechanical Engineering 504 1

Spring

Business Administration 513 MBA Core III 9

Mechanical Engineering 506 2

Mechanical Engineering 508 3

Summer

— Internship —

Mechanical Engineering 509 1

Fall—Second Year

Mechanical Engineering 509 1

— Engineering Courses 9

Spring

— MBA Hub Course Elective 3

Mechanical Engineering 509 1

— Engineering Courses 9

Summer (first session)

Mechanical Engineering 594 3

Total 60

DEPARTMENT OF NUCLEAR ENGINEERING**Nuclear Engineering (716)****I. Course Changes**

REVISE TITLE OF PRIMARY CROSS-LISTED COURSE

484 Introduction to Maintainability Engineering (3) *(See Nuclear Engineering 484.)***II. Program Changes**

REVISE DUAL MS-MBA PROGRAM - NUCLEAR ENGINEERING MAJOR

➤ On page 254 of the 2004-2005 Graduate Catalog, revise showcase to:

DUAL MS-MBA**Curriculum for Dual MS-MBA Degree •****Nuclear Engineering Major****August—First Year**

Business Administration 511 MBA Core I 3

Fall—First Year

Business Administration 512 MBA Core II 15

Mechanical Engineering 504 Product Development Process 1

Spring

Business Administration 513 MBA Core III 9

Mechanical Engineering 506 Product Selection and Evaluation 2

Mechanical Engineering 508 Integrated Product, Process,
and Manufacturing System Design 3**Summer**

—Internship —

Nuclear Engineering 509 Project Management 1

Fall — Second Year

Nuclear Engineering 509 Project Management 1

—Nuclear Engineering Courses 9

Spring

—MBA Hub Course Elective 3

Nuclear Engineering 509 Project Management 1

—Nuclear Engineering Courses 9

Summer (first session)

Nuclear Engineering 594 Culminating Integrated Project Report 3

Total 60

COLLEGE OF NURSING**ALL CHANGES EFFECTIVE: FALL 2005****I. Course Changes****Nursing (720)**

ADD

519 Psychopharmacology in Advanced Practice (3) Examination of the neurobiological basis of psychiatric illness and the use of psychopharmacological agents to modify symptoms and outcomes. Evaluation of the role of psychoactive medications in relation to the use of other psychotherapeutic interventions. Prereq: Undergraduate pharmacology course or consent of instructor.

524 Basic Principles of Anesthesia I (3) An introduction to the scientific principles upon which anesthesia administration is based. The focus of this course (part one of a two-part series) is on the sound elementary principles of safe anesthesia delivery for the beginning practitioner.

525 Basic Principles of Anesthesia II (3) A continuation of 524 (Basic Principles of Anesthesia I) which builds upon the previous course to provide advanced elementary scientific principles upon which nurse anesthetists implement plans of care which have been developed. The focus of this course (part two of a two-part series) is on the sound basic principles of safe anesthesia management for the beginning practitioner.

526 Professional Issues in Nurse Anesthesia (2) Exploration of historical and current issues surrounding nurse anesthesia education, practice, and the profession.

573 Family Nurse Practitioner III (8) Continuation of 572. Advanced nursing management of multiple/complex health problems of individuals and families in all developmental life stages; role refinement and exploration of major issues of the family nurse practitioner; clinical experience in a variety of settings. Didactic (2) and practicum (6). Prereq: 501, 572. Prereq/Coreq: 582.

DROP

521 Basics of Nurse Anesthesia (6)

REVISE COURSE DESCRIPTION

523 Advanced Principles of Nurse Anesthesia Practice (2) Advanced concepts/principles of anesthetic management and legal implications of nurse anesthesia practice.

REVISE CREDIT HOURS AND CONTACT HOUR DISTRIBUTION

561 Mental Health Nursing II (7) Continuation of 560. Advanced practice nursing in community settings for families and groups with actual and potential mental health problems. Didactic (2) and practicum (5).

570 Family Nurse Practitioner I (6) Application of advanced health/physical assessment and diagnostic reasoning in nursing management and primary care of individuals and their families with actual and potential acute health problems; clinical experience in role of family nurse practitioner in variety of settings. Didactic (2) and practicum (4). Prereq: 504, 505, 515.

REVISE CREDIT HOURS, DESCRIPTION, AND CONTACT HOUR DISTRIBUTION

571 Family Nurse Practitioner II (3) Continuation of 570. Emphasizes increasing advanced nursing competencies in the management and primary care of individuals and their families in all developmental life stages; Prereq or coreq: 507, 510.

REVISE TITLE, DESCRIPTION, CREDIT HOURS, AND CONTACT HOUR DISTRIBUTION

572 Family Nurse Practitioner II Clinical (2) Continuation of 571. Clinical experience in a variety of settings emphasizing advanced nursing competencies in the management and primary care of individuals and their families in all developmental life stages. Practicum (2). Prereq: 571.

REVISE CREDIT HOURS AND REPETITION

583 Directed Clinical Practice (1-10) Additional opportunities for advanced nursing practice. Objectives to be developed collaboratively by student and faculty. Prereq: Enrollment in or completion of graduate level courses in clinical nursing. May be repeated. Maximum 14 hours.

REVISE PREREQUISITE/COREQUISITE

530 Adult Health Nursing I (6) Prereq/Coreq: 507, 510.
550 Nursing of Women and Children I (8) Prereq/Coreq: 507, 510.
560 Mental Health Nursing I (6) Prereq/Coreq: 507, 510.
571 Family Nurse Practitioner II (6) Prereq/Coreq: 507, 510.
590 Nursing Administration: Macro-Analysis (6) Prereq: 510. Coreq: 501, 507.
591 Nursing Administration: Micro-Analysis (6) Prereq: 510. Coreq: 501, 507.
603 Nursing Research and Inquiry (3) Prereq: 601.
605 Middle-Range Theoretical Formulations for Nursing Science Development (3) Prereq: 601, 603, 610.
607 Qualitative Nursing Research (3) Prereq: 601, 603. Coreq: 607.
608 Quantitative Nursing Research (3) Prereq: 601, 603.
614 Nursing Preceptorship (3) Prereq: 601.

II. Program Changes

REVISE LIST OF COURSES OPEN TO STUDENTS IN NON-DEGREE STATUS

- On page 264 of the 2004-2005 Graduate Catalog, 2nd column, Non-Degree Status revise text:

Only 501, 505, 510, 511, and 515 are open to students in Non-Degree Status. Students not yet accepted into the master's program must see the Chair of the MSN Program for advising prior to enrolling in any course.

REVISE SHOWCASES TO REFLECT COURSE REVISIONS – MASTER OF SCIENCE IN NURSING, NURSING MAJOR

- On page 264-265, revise showcases to:

Program Requirements

All students must complete a minimum of 36 semester hours distributed as follows:

	Hours	Credit
Core (7 credits)		
507 Concepts for Advanced Practice Nursing: Health Promotion and Health Policy	4	
510 Theoretical Foundations of Nursing	3	
Advanced Practice Core (9 credits) *		
504 Advanced Health/Physical Assessment	3	
505 Advanced Clinical Pharmacology	3	
515 Advanced Pathophysiology for Nursing Practice (not required for nurse anesthesia students)	3	
Required for nurse anesthesia students:		
506 Advanced Anesthesia Pharmacology	3	
516 Advanced Pathophysiology: Neurological and Cardiovascular with Anesthesia Implications	2	
517 Advanced Pathophysiology: Respiratory/Renal with Anesthesia Implications	2	
518 Advanced Pathophysiology: Obstetrics/Regional Anesthesia	2	
523 Advanced Principles of Nurse Anesthesia Practice	2	
524 Basic Principles of Anesthesia I	3	
525 Basic Principles of Anesthesia II	3	
526 Professional Issues in Nurse Anesthesia	2	
Research (6-9 credits)		
501 Nursing Research: Methods, Design and Analysis	3	
500 Thesis	6	
OR		
582 Scholarly Inquiry for Advanced Practice Nursing	3	

Concentration (12-17 credits) choose one

530-531 Adult Health I, II	13
544-545-546-547-548-549 Clinical Nurse Anesthesia Practicum/ Seminar I, II, III, IV, V, VI	40
550-551 Nursing of Women and Children I, II	16
560-561 Mental Health Nursing I, II	13
570-571-572-573 Family Nurse Practitioner I, II, III	19
590-591 Nursing Administration I, II	12

Electives (9 credits)

Required for students in nursing administration concentration only

* not required for nursing administration concentration

Students who enter the program as non-RNs must complete the following undergraduate nursing courses in addition to meeting the requirements listed above:

	Hours Credit
311 Foundations of Professional Nursing Practice	5
319 Pathophysiology of Health Deviations	4
333 Health Assessment	3
341 Transcultural Nursing	2
351 Pharmacology I	2
361 Health Maintenance and Restoration: Adult	5
382 Health Promotion and Maintenance in the Community	5
406 Pharmacology II	2
415 Family/Community Health Nursing	6
421 Health Maintenance and Restoration in Mental Health	4
444 Care of Children, Adolescents, and Their Families	2
454 Professional Leadership Issues	2
461 Health Restoration: Adult	4

Registered nurses whose bachelor's degrees are not in nursing must have completed courses in chemistry, nutrition, microbiology, anatomy, and physiology plus 12 hours of behavioral science courses. They must also complete 305, 432, and 454 and complete or successfully challenge the following:

	Hours Credit
311 Foundations of Professional Nursing Practice	5
319 Pathophysiology of Health Deviations	4
333 Health Assessment	3
351 Pharmacology I	2
361 Health Maintenance and Restoration: Adult	5
403 Health Promotion and Maintenance in Childbearing Families	5
406 Pharmacology II	2
421 Health Maintenance and Restoration in Mental Health	5
454 Professional Leadership Issues *	2
461 Health Restoration: Adult	4
490 Specialty Preceptorship	4

* cannot be challenged

A total of 24 credits can be obtained by successful completion of the NLN ACE Examination. See undergraduate catalog for other challenge options. RNs who are in the process of completing a BSN at the University of Knoxville, with the intent of enrolling in the MSN program, follow the same plan with the addition of 471.

REVISE RN-MSN TRACK

➤ On page 266 of the 2004-2005 Graduate Catalog, revise showcases as follows:

ADULT HEALTH NURSING

	Hours Credit
382 Health Promotion and Maintenance in Community	5
305 Transition to Professional Nursing	4
*333 Health Assessment	3
* 351 Pharmacology	2
511 Statistical Applications to Nursing Research (OR equivalent)	3
*319 Pathophysiology of Health Deviations	4
*406 Pharmacology II	2
454 Professional Leadership Issues	2
501 Nursing Research	3

507 Concepts for Advanced Practice Nursing: Health Promotion and Health Policy	4
510 Theoretical Foundations of Nursing	3
515 Advanced Clinical Pathophysiology	3
504 Advanced Health/Physical Assessment	3
505 Advanced Pharmacology	3
530 Adult Health Nursing I	6
582 Scholarly Inquiry for APN	3
531 Adult Health Nursing II	7
MENTAL HEALTH NURSING	Hours Credit
382 Health Promotion and Maintenance in Community	5
305 Transition to Professional Nursing	4
*333 Health Assessment	3
* 351 Pharmacology	2
511 Statistical Applications to Nursing Research (OR equivalent)	3
*319 Pathophysiology of Health Deviations	4
*406 Pharmacology II	2
454 Professional Leadership Issues	2
501 Nursing Research	3
507 Concepts for Advanced Practice Nursing: Health Promotion and Health Policy	4
510 Theoretical Foundations of Nursing	3
515 Advanced Clinical Pathophysiology	3
504 Advanced Health/Physical Assessment	3
505 Advanced Pharmacology	3
560 Mental Health Nursing I	6
582 Scholarly Inquiry for APN	3
561 Mental Health Nursing II	7
NURSING OF WOMEN AND CHILDREN**	Hours Credit
382 Health Promotion and Maintenance in Community	5
305 Transition to Professional Nursing	4
*333 Health Assessment	3
* 351 Pharmacology	2
511 Statistical Applications to Nursing Research (OR equivalent)	3
*319 Pathophysiology of Health Deviations	4
*406 Pharmacology II	2
454 Professional Leadership Issues	2
501 Nursing Research	3
507 Concepts for Advanced Practice Nursing: Health Promotion and Health Policy	4
510 Theoretical Foundations of Nursing	3
515 Advanced Clinical Pathophysiology	3
504 Advanced Health/Physical Assessment	3
505 Advanced Pharmacology	3
550 Nursing of Women and Children I	6
552 Care of the Critically-Ill Neonate (3) or Child Development **	3
582 Scholarly Inquiry for APN	3
551 Nursing of Women and Children II	6
** PNP students must complete a graduate level child development course	
** NNP students must complete Nursing 552	
FAMILY NURSE PRACTITIONER	Hours Credit
382 Health Promotion and Maintenance in Community	5
305 Transition to Professional Nursing	4
*333 Health Assessment	3
* 351 Pharmacology	2
511 Statistical Applications to Nursing Research (OR equivalent)	3
*319 Pathophysiology of Health Deviations	4
*406 Pharmacology II	2
454 Professional Leadership Issues	2
501 Nursing Research	3
507 Concepts for Advanced Practice Nursing: Health Promotion and Health Policy	4
510 Theoretical Foundations of Nursing	3
515 Advanced Clinical Pathophysiology	3
504 Advanced Health/Physical Assessment	3
505 Advanced Pharmacology	3
570 Family Nurse Practitioner I	6
571 Family Nurse Practitioner II	3
582 Scholarly Inquiry for APN	3
572 Family Nurse Practitioner II Clinical	2
573 Family Nurse Practitioner	8

NURSING ADMINISTRATION

	Hours Credit
382 Health Promotion and Maintenance in Community	5
305 Transition to Professional Nursing	4
*333 Health Assessment	3
*351 Pharmacology	2
511 Statistical Applications to Nursing Research (or equivalent)	3
*319 Pathophysiology of Health Deviations	4
*406 Pharmacology II	2
454 Professional Leadership Issues	2
501 Nursing Research	3
507 Concepts for Advanced Practice Nursing: Health Promotion and Health Policy	4
510 Theoretical Foundations of Nursing	3
591 Nursing Administration Microanalysis	6
590 Nursing Administration Macroanalysis	6
582 Scholarly Inquiry for APN	3

REVISE COURSE REQUIREMENTS FOR GRADUATE CERTIFICATE IN ADULT HEALTH NURSING

REVISE COURSE REQUIREMENTS FOR GRADUATE CERTIFICATE IN NURSE PRACTITIONER

- On page 268, 1st column, of the 2004-2005 Graduate Catalog, revise Graduate Certificates as follows:

Adult Health Nursing

Course requirements are 530 and 531, plus additional hours as determined by the college.

Family Nurse Practitioner

Course requirements are 570, 571, 572, and 573, plus additional hours as determined by the college.