Graduate Council Report

April 7, 2011

New Courses

CVEN 753. Damage Mechanics of Solids and Structures. (3-0). Credit 3. Damage mechanics; constitutive modeling of damage behavior of materials; application of thermodynamic laws; computational techniques for predicting progressive damage and failure; plasticity; viscoplasticity; viscoelasticity; cohesive zone modeling; fatigue and creep damage; damage in various brittle and ductile materials (e.g., metal, concrete, polymer, ceramic, asphalt, biomaterial, composites). Prerequisite: CVEN 633 or approval of instructor. Cross-listed with: MEMA 634

EDCI 605. Qualitative Research Methods in Curriculum and Instruction. (3-0). Credit 3. Theoretical and methodological issues related to qualitative inquiry; discussion of qualitative paradigm’s ontological, epistemological, and axiological stances; review and implementation of commonly used qualitative research methods and approaches in curriculum and instruction, including narrative, phenomenology, ethnography, grounded theory, and case study approaches. Prerequisite: Graduate classification.

EDCI 686. Research Methods in EDCI:I. (3-0). Credit 3. Framework for understanding distinctions among research methodologies used in the field of curriculum and instruction; includes classes of research questions, methods of collecting and decisioning evidence, theoretical assumptions, strengths, weaknesses, and the work of major proponents. Prerequisite: Admission into TLAC Doctoral Program.

EDCI 687. Research Methods in EDCI:II. (3-0). Credit 3. Framework for understanding distinctions among research methodologies used in the field of curriculum and instruction; includes classes of research questions, methods of collecting and decisioning evidence; basic principles of descriptive and inferential statistics and their application in context of various research paradigms. Prerequisite: EDCI 686 Research Methods in EDCI: I.

EDCI 688. Research Methods in EDCI:III. (3-0). Credit 3. Framework for understanding distinctions among research methodologies used in the field of curriculum and instruction; includes classes of research questions, methods of collecting and decisioning evidence; basic principles of multivariate statistics and their application in context of various research paradigms. Prerequisite: EDCI 687 Research Methods in EDCI: II.

HLTH 644. Health Education Theory. (3-0). Credit 3. Theory in the practice of Health Education; selected theories and their structure, function, and value to health professionals. Prerequisite: Graduate classification; accepted to E-Master’s program in Health Education.

HLTH 646. Health Education Training. (3-0). Credit 3. Designing, implementing, and evaluating workforce training for professional health educators; emphasis on evidence-based workforce training. Prerequisite: Graduate classification; accepted to E-Master’s program in Health Education.

MARB 668. Marine Evolutionary Biology. (3-0). Credit 3. Lecture, readings, and discussions on advanced evolutionary topics including: history of evolutionary thought, organic evolution, evolutionary methods,
and modern applications to organismal evolutionary questions. Students will lead and participate in journal club style discussion of selected recent literature. Prerequisite: Graduate standing.

**Math 620. Algebraic Geometry I. (3-0). Credit 3.** Affine and projective varities; sheaves; cohomology; Riemann-Roch Theorem for curves. Prerequisite: Math 653 or approval of instructor.

**MEEN 616. Surface Science. (2-2). Credit 3.** Properties of surfaces, principles of classic and contemporary surface characterization techniques, recent development and roles of surface science in advanced technology. Prerequisite: Graduate classification. Cross-listed with: MSEN 616.

**MEEN 656. Introduction to Mechanical and Physical Properties of Thin Films and Coatings. (3-0). Credit 3.** Mechanical properties (hardness, stress, strain, delamination, fracture) of films; nanomechanical testing techniques; electrical properties of thin films; electrical properties measurement techniques; magnetic properties of films; magnetic properties measurement techniques; laboratory includes (1) thin film fabrication (sputtering, PVD); (2) nanomechanical testing; (3) electrical/magnetic measurement. Prerequisite: MEEN 222, MSEN 601, or basic materials science background. Cross-listed with: MSEN 656.

**MEMA 634. Damage Mechanics of Solids and Structures. (3-0). Credit 3.** Damage mechanics; constitutive modeling of damage behavior of materials; application of thermodynamic laws; computational techniques for predicting progressive damage and failure; plasticity; viscoplasticity; viscoelasticity; cohesive zone modeling; fatigue and creep damage; damage in various brittle and ductile materials (e.g., metal, concrete, polymer, ceramic, asphalt, biomaterial, composites). Prerequisite: CVEN 633 or approval of instructor. Cross-listed with: CVEN 753.

**MSEN 616. Surface Science. (2-2). Credit 3.** Properties of surfaces, principles of classic and contemporary surface characterization techniques, recent development and roles of surface science in advanced technology. Prerequisite: Graduate classification. Cross-listed with: MEEN 616 Surface Science.

**MSEN 656. Introduction to Mechanical and Physical Properties of Thin Films and Coatings. (3-0). Credit 3.** Mechanical properties (hardness, stress, strain, delamination, fracture) of films; nanomechanical testing techniques; electrical properties of thin films; electrical properties measurement techniques; magnetic properties of films; magnetic properties measurement techniques; laboratory includes (1) thin film fabrication (sputtering, PVD); (2) nanomechanical testing; (3) electrical/magnetic measurement. Prerequisite: MEEN 222, MSEN 601, or basic materials science background. Cross-listed with: MSEN 656.

**WGST 645. Queer Theory. (3-0). Credit 3.** Examines origins of theories of gender and sexual diversity and their intersections with feminist theories; considers foundational and contemporary texts that address queer theory. Prerequisite: Graduate classification.
**Course Change Requests**

**CSCE 667. Seminar in Human-Centered Computing and Information.**

**Prerequisite:**

FROM:

CSCE 310 or 603, 313 or 611, a program language (C++/JAVA) and CSCE 436 or 671 or 672 or approval of instructor and graduate classification.

TO:

Graduate classification

**Title:**

FROM:

Collaborative Systems and Models

TO:

Seminar in Human-Centered Computing

**Description:**

FROM:

Collaborative systems support group activities over computer networks; emphasis on human factors, system design is different from traditional systems; overviews existing research efforts to address various design issues; state-of-the-art knowledge and how to implement collaborative applications.

TO:

Problems, methods and recent developments in human-centered computing and information. This course may be taken at multiple times for credit as content varies.

**EDCI 665. Science Curriculum.**

**Title:**

FROM:

Science Curriculum

TO:

Science and Mathematics Curricula
Description:

FROM:

Critical exploration of the trends and issues in school science programs; consideration of the foundations and strategies for the design, selection and evaluation of science curriculum.

TO:

Critical exploration of the trends and issues in school science and mathematics programs; consideration of the foundations and strategies for the design, selection, and evaluation of mathematics and science curricula.

EPSY 605. Effects of Culture, Diversity, and Poverty on Children and Youth. Credit 3.

Description:

FROM:

Understanding how the intersecting nature of culture, diversity, and poverty impact adjustment outcomes in children and youth; comprehension of our own belief systems; explore disparities in education, achievement, mental and physical health across ethnically, culturally and social economically diverse groups and strategies for alleviating disparities.

TO:

Understanding of how the intersecting nature of culture, diversity, and poverty impact adjustment outcomes in children and youth; comprehension of our own belief systems; exploration of disparities in education and mental health across ethnically, culturally and social economically diverse groups; strategies for alleviating educational and mental health disparities.

EPSY 632. Research in Second Language Education.

Course Prefix:

FROM:

EPSY 632

TO:

BIED 632
**Special Consideration Item:**

Graduate Council approved the College of Education and Human Development request to delete the Career Development Education doctoral program from the TAMU programs of study.
**Special Consideration Item**

Graduate council approved the College of Education and Human Development request for prefix change for graduate courses in the Bilingual Program from EPSY to BIED.