

## 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 varieties; 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: MEEN 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.