

## **ADDENDUM I**

Graduate Studies Committee

March 18, 2008

- B E 541**                    **Systems Bioengineering** [new course] Provides fundamental information and concepts about physiological systems, emphasizing the cardiovascular, pulmonary, renal, endocrine, musculoskeletal, nervous and sensory systems.
- B E 550**                    **Cellular Bioengineering** [new course] integrate cellular biology and engineering science, understand cellular phenomena from engineering perspectives and apply quantitative engineering principles for cellular-based materials, diagnostic device and sensor designs.
- BsysE/C E 555**            **Natural Treatment Systems**[crosslist change BsysE to parent] Prereq senior or graduate standing. Principles and design procedures of natural systems for wastewater treatment for agricultural and non-agricultural applications.
- Chem 545**                **Chemistry of Functional Groups** [new course] Chemistry of Functional Groups is organized around a revisiting of topics typically taught in an undergraduate curriculum with an emphasis on modern synthetic reactions and physical methods used in exploring reaction mechanisms.
- Com 514**                **Health Communication Theories and Campaigns** [new course] Examination of health communication theories with a focus on campaign construction and evaluation.
- Com 550**                **Media Processes and Effects: Theory and Practice** [new course] Focus on physiological, psychological and social effects of media messages and technologies upon individuals and societies.
- Com 552**                **Current Issues in Media Processes and Effects** [new course] Covers current issues in media processes and effects.
- CptS 540**                **Artificial Intelligence** [new course conjoint] Prereq Cpt S 122; Math 212 or 360. An introduction to the field of artificial intelligence including heuristic search, knowledge representation, deduction, uncertainty reasoning, learning, and symbolic programming languages. Graduate – level counter part of CptS 440; additional requirements. Credit not granted for both CptS 440 and 540.
- CS 558**                **Wireless Sensor Networks** [new course] Design and implementation of sensor networks.

- Desgn 561**                    **Seminar in Design Thinking** [new course] This seminar is devoted to discussing and understanding what is referred to as ‘design thinking’ or ‘design knowing,’ and translating appropriate research and theory into practice.
- Desgn 563**                    **Directed Readings** [new course] Advanced critical and comprehensive reviews of the literature pertinent to student’s area of interdisciplinary focus; development of specialization and expertise with regards to critical evaluation and synthesis in identified area.
- Desgn 564**                    **Design Research Methods** [new course] The purpose of this seminar is to guide doctoral students in the development and preparation of their research proposals, including identification of theories, exploration of research methods and strategies, and development of thesis statement and literature review.
- Desgn 565**                    **Dissertation Proposal Preparation** [new course] The purpose of this course is to write the research proposal to be presented to prospective doctoral committee members. Each student is expected to work independently to develop a proposal based on the work of Desgn 564 Design Research Seminar.
- Desgn 590**                    **Teaching Practicum** [new course] Supervised teaching experience integrating application of design knowledge and approaches.
- E E 587**                        **System on Chip (SoC) Design and Test** [new course] System on Chip design and test. Covers deep sub-micron integrated circuit design and test.
- E M 538**                        **Lean Agility** [new course] Integration of the best of Lean, Six Sigma and Theory of Constraints to accelerate the continuous improvement process.
- EM 564**                        **Project Management** [conjoint] Course examines technical tools, Critical Path Method (CPM), Program Review Techniques (PERT), Cost/Schedule Control Systems, behavioral issues, organizational structure.
- EconS 529**                    **Research Methods** [new course/cooperative] Social Science Master’s thesis as a research journey toward craftsmanship including elements of imagination, modeling, mindfulness, guidelines, and mentor experience. (Spring Only)
- EconS 598**                    **PhD Research Seminar** [repeat credit cum max 4] A seminar that focuses on PhD students presenting their own research and critically assessing the research of other PhD students. S,F grading.

- Engl 554**                    **History of the English Language** [conjoint] Language related to the origin, history, and literature of its speakers. Graduate-level counterpart of Engl 454; additional requirements. Credit not granted for Engl 454 and 554.
- Engl 584**                    **English Literature of the 16<sup>th</sup> Century** [conjoint] Nondramatic literature of English Renaissance, including More, Wyatt, Sidney, Spenser, Raleigh, and Shakespeare, in age of Humanism and Reformation. Graduate-level counterpart of Engl 484; additional requirements. Credit not granted for Engl 484 and 584.
- Hist 561**                    **Field course in Early Modern European History** [new course repeat credit cum max 6] Readings and interpretive problems in early modern European history 1450-1750.
- Mech 538**                    **Microrfabrication Technology** [change description, prereqs and lecture lab ratio from 3 (2-3) to 3] Microelectronic fabrication technology, semiconductor materials, diffusion, thermal oxidation, ion implantation, lithography, etching, thin film deposition, CMOS integration, fundamentals of MEMS.
- Mech 542**                    **Advanced Thermal Systems** [new course] Analysis and design of advanced thermal systems at macro, mini, and micro scale, apply design software packages, perform design projects.
- Mech 550**                    **Micro and Nano Technology** [title and prereq change] Microfabrication technology, bulk and surface micromachining, sensors and actuators, microelectromechanical systems (MEMS), nanofabrication technology, micro/nano scale material and device measurements.
- Mech 589**                    **Material Failure in Mechanical Design** [new course] Analysis, design, and prevention from failure of materials in mechanical design; mechanical behavior of materials such as fatigue, fracture and wear.
- NURS 572**                    **Chronic Biobehavioral Nursing Outcomes** [new course] Analyzes concepts, theories, and research relevant to preventing and managing chronic conditions across the lifespan.
- NURS 574**                    **Acutre Biobehavioral Nursing Outcomes** [new course] An overview of research methods, procedures and analysis of acute phenomena in nursing with a focus on vulnerable populations.
- NURS 584**                    **System of Health Care Delivery** [new course] Examination of health care delivery systems in the U.S. and worldwide, addressing barriers to care, social justice, vulnerability, access disparity.

- NURS 593**      **Preliminary Examination Seminar** [new course] Students will examine methods to synthesize knowledge from courses to present and analyze scholarly nursing science knowledge.
- Psych 574**      **Physiological Psychology** [add coop with UI] Neuroanatomical, neurochemical, and other biological cases of human and animal behavior.
- Psych 575**      **Foundations of Neuropsychology** [add coop with UI] Foundations in brain/behavior relationships and neuropathological syndromes; preparation for advanced training in neuropsychological assessment.
- Psych 577**      **Behavioral Pharmacology** [add coop with UI] Prereq Psych 574 or graduate standing in Neuro or P/T. Survey of drugs which affect brain function with emphasis on animal models and clinical applications.
- Psych 579**      **Behavioral Neuroscience** [add coop with UI] Prereq Psych 574 or graduate standing in Neuro or P/T. Advanced topics in neurochemistry, neurophysiology, and neuroanatomy, as they relate to behavior.
- Psych 584**      **Sensory Bases of Behavior** [add coop with UI] Sensory and physiological aspects of vision, audition, and other senses.
- Phil 508**      **Critical Theory and Continental Aesthetics** [temporary course crosslist] Examination and analysis of principal texts and strategies of critical theory and continental aesthetics from Kant to Zizek.
- Pol S 537**      **Concepts and Methods in Comparative Politics** [repeat credit cum max 6] Selected concepts (state, political participation), and methods (cross-national analysis, case study approaches) in comparative politics.
- Soils/ES/RP 568**      **ArcGIS and Geospatial Analysis B** [crosslist with existing ES/RP 568] Rec DOS knowledge. Graduate-level counterpart of ES/RP 486; additional requirements. Credit not granted for both ES/RP 486 and 586.
- T & L 504**      **Advanced Study in Linguistics for Educators** [new course] To use linguistics to better understand second language learning and teaching and the physical aspects of acquiring language.
- T & L 550**      **Second Language Learning and Literacy** [new course] Research on second language teaching and learning in literacy education with a focus on English language learners in U.S. Schools.
- T & L 567**      **Social Foundations of Literacy** [new course] Explores the social, cultural, and political factors which influence the acquisition and use of literacy.

- T & L 568**                    **Psychological Foundations and Assessment of Literacy** [new course]  
Takes an historical look that blends the assessment of literacy and its psychological components.
- T & L 569**                    **Critical Analysis of Children's and Young Adult Literature** [new course]  
Critical multicultural analysis of children's and adolescent literature and its pedagogical and sociopolitical implications and possibilities.
- T & L 570**                    **Theory and Research in Electronic Literacies** [new course]  
Development of ideas of literacy and effects of technology on literacy and policy, particularly those issues addressing diverse learners.