

**Graduate Council Report
September 1, 2011**

New Course Requests:

CSCE 635. AI Robotics. (3-1). Credit 3. This course is an introduction and survey of artificial intelligence methods for mobile robots (ground, aerial, or marine) for science and engineering majors. It covers both the theory and the practice of unmanned systems, focusing on biological and cognitive principles which are often quite different from control theory formulations.

ECEN 711. Sustainable Energy and Vehicle Engineering. (3-0). Credit 3. Forms of sustainable and unsustainable energy resources and the basic system engineering limits of each; specific problems of sustainable transportation energy will be discussed on the bases of vehicle and power engineering. Issues related to energy efficiency, life cycle analysis, global warming, pollution, economic and social considerations will be discussed. Prerequisite(s): Graduate standing in Engineering.

ECEN 720. High-Speed Links Circuits and Systems. (3-1). Credit 4. This course covers system and circuit design of high-speed electrical and optical link systems. Topics include channel properties, communication techniques, and circuit design of drivers, receivers, equalizers, and synchronization systems. The course project consists of link design with a statistical bit error rate simulator and interface circuit design. Prerequisite(s): ECEN 474.

NUEN 662. Nuclear Materials under Extreme Conditions. (3-0). Credit 3. Fundamentals of materials degradation under reactor environments; linkage from radiation induced microstructure changes to materials thermal properties, mechanical properties, corrosion resistance, swelling, creep, and overall integrities; materials issues of nuclear fuel, cladding, out-core structural components and waste storage managements. Prerequisite(s): Graduate classification or approval of instructor.

NUEN 663. Fundamentals of Ion Solid Interactions. (3-0). Credit 3. Fundamentals of neutron and ion interactions with solid state materials, and subsequent damage cascade formation, defect clustering, and structural changes; electronic stopping and nuclear stopping mechanisms based on classic and quantum mechanics treatments; development of basic modeling capabilities to carry out simulations for relevant research topics. Prerequisite(s): Graduate classification or approval of instructor.

PETE 684. Professional Internship. (0-0). Credit 4. Training under the supervision of practicing professional engineers in settings appropriate to the student.

Course Change Requests:

CHEN 681. Seminar.

Description Change:

FROM: Graduate students will be required to attend discussions covering problems of current importance in chemical engineering research.

TO: Presentations and discussions covering problems of current importance in chemical engineering research.

CHEN 684. Professional Internship.

Prerequisite Change:

FROM: Graduate classification.

TO: Approval of chair of student's advisory committee and department head.

Description Change:

FROM: Each semester – Engineering research or design experience in industrial setting away from Texas A&M campus; projects supervised jointly by faculty and industrial representative.

TO: Engineering research experience in industrial setting away from Texas A&M campus; projects supervised jointly by faculty and industrial representative.

CHEN 685. Directed Studies.

Description Change:

FROM: One or more numerous problems in chemical engineering processes and operations.

TO: Limited investigations in fields other than those chosen for thesis or dissertation research and not covered by other formal courses.

CHEN 691. Research.

Description Change:

FROM: Problems of unit operations and unit processes. For maximum credit, comprehensive thesis must be prepared of sufficiently high calibre to permit publication in scientific and technical journals.

TO: Research for thesis or dissertation.

CVEN 614. Stabilization of Soil-Aggregate Systems.

Description Change:

FROM: Theory of mechanical and chemical stabilization of soils and soil-aggregate systems.

TO: Theory and practice of chemical stabilization of soils and aggregate systems with traditional methods of chemical stabilization including Portland cement, lime, fly ash and by products (kiln dusts, fly ash and slag materials); selected non-traditional methods including polymers, ionic systems, and enzymes; mechanisms and methods to avoid deleterious reactions.

ECEN 612. Computer Aided Sign of Electromechanical Motion Devices.

Courses Hours:

FROM: (3-0). Credit 3.

TO: (3-1). Credit 4.

Course Withdrawals:

CSCE 607. Software Models and Metrics.

CSCE 609. AI Approaches to Software Engineering.

CSCE 615. Distributed Component Architecture.

CSCE 618. Resilient Computer Systems.

CSCE 623. Parallel Geometric Computing.

CSCE 632. Expert Systems.

CSCE 651. Simulation I.

CSCE 677. Switching Theory.

Graduate Council Report
September 1, 2011

Special Consideration Item:

Graduate Council approved the Proposed 2012-2013 Academic Calendar.

Graduate Council Report
September 1, 2011

Special Consideration Item:

Graduate Council approved the Proposed, Abbreviated Academic Calendar 2013-2014.