

Memo To: Faculty Senate  
From: Missouri S&T Campus Curricula Committee Meeting  
RE: April 11, 2012

**The Missouri S&T Campus Curricula Committee recommends to the Faculty Senate that the name change on the following NC form be approved.**

**Approved NC form:**

NC 15, Chemical & Biological Engineering. A proposal to change the Chemical & Biological Engineering department's name to Chemical & Biochemical Engineering. Approved by the Campus Curricula Committee and is being referred to Budgetary Affairs for review.

**The Missouri S&T Campus Curricula Committee recommends to the Faculty Senate that the curriculum changes and degree proposals on the following DC forms be approved.**

**Approved DC forms:**

DC 0414, Biological Sciences, Bachelor of Arts. The following change is approved effective Fall 2012. A proposal to change the current requirements for the B.A. in Biology Secondary Education Emphasis area to make coursework more consistent with state requirements and to reduce the total credit hours from 137 to 131.

DC 0415, English, Creative Writing Minor, approved effective Fall 2012.  
A proposal to create a new minor in Creative Writing.

**The Missouri S&T Campus Curricula Committee recommends to the Faculty Senate that the course changes on the following CC forms be approved.**

**Approved CC forms:**

CC 8221, Electrical Engineering 225, Electronic and Photonic Devices. The following changes are approved effective Fall 2012.

Catalog Description – Proposed: Semiconductor materials and devices for electronic and photonic applications. Topics include crystal physics, electron and photon behavior, pn junctions, heterojunctions, junction diodes, optoelectronic devices, and ohmic and rectifying contacts.

Prerequisites – Present: Physics 24, Math 22, and preceded or accompanied by EE 271  
Proposed: EE 121 and EE 153 each with grade of “C” or better; passing the EE Advancement Exams II and III.

CC 8225, Biological Sciences 351, Environmental Microbiology. New course approved effective Fall 2012.

Catalog Description: Environmental Microbiology is an interdisciplinary study of how microorganisms can impact humans and applied to solve problems such as water treatment and environmental cleanup of contaminants. This course differs from Bio Sci 451 as no NSF-style report or presentation is required.

Credit Hours: 3 hour lecture

Prerequisites: BioSci 221

CC 8226, IDE 50, Engineering Mechanics – Statics. The following changes are approved effective Spring 2013. Appropriate changes will also be made for any other department or curriculum that this change will affect.

Course Number – Proposed: CE 50

Course Title – Proposed: Statics

CC 8227, IDE 110, Mechanics of Materials. The following changes are approved effective Spring 2013. Appropriate changes will also be made for any other department or curriculum that this change will affect.

Course Number – Proposed: CE 110

Catalog Description – Proposed: Application of the principles of mechanics to engineering problems of strength and stiffness. Topics include stress, strain, thin cylinders, torsion, beams, and combined stresses at a point.

Prerequisites – Present: IDE 50 with grade of “C” or better and Math 22

Proposed: CE 50 with grade of “C” or better

CC 8228, IDE 120, Materials Testing. The following change is approved effective Spring 2013. Appropriate changes will also be made for any other department or curriculum that this change will affect.

Course Number – Proposed: CE 120

CC 8229, English 205, Fiction Writing. New course approved effective Fall 2012.

Catalog

Catalog Description: This course introduces students to concepts of craft in fiction writing and the critical tools writers bring to revision. Students will write and present their own fully-developed stories and examine the stories of others in a workshop format.

Credit Hours: 3 hour lecture

Prerequisites: English 20 or equivalent

CC 8230, English 208, Creative Nonfiction Writing. New course approved effective Fall 2012.

Catalog Description: Students will write creative nonfiction essays about their experiences and the experiences of others. The course will emphasize the revision process, focusing on both sentence-level and global issues. Additionally, this course will introduce students to published writers' rhetorical choices.

Credit Hours: 3 hour lecture

Prerequisites: English 20 or equivalent

CC 8231, Technical Communication 440, Advanced Layout and Design. New course approved effective Fall 2012.

Catalog Description: Advanced theory and practice of layout and design for print and electronic media. Students who have taken Tch Com 240 may not take this course for credit.

Credit Hours: 3 hour lecture

Prerequisites: Graduate Standing

CC 8233, Math 303, Mathematical Modeling. The following changes are approved effective Fall 2012.

Course Title – Proposed: Methods of Applied Mathematics

Catalog Description – Proposed: Methods to develop and analyze mathematical models. Topics include dimensional analysis and scaling, perturbation methods, and the construction of ordinary and partial differential equation models.

CC 8234, Mining Engineering 302, Computer Applications in the Mining & Minerals Industry. The following changes are approved effective Fall 2012.

Course Title – Proposed: Computer-Aided Mine Design

Catalog Description – Proposed: Project-based mine planning and design course.

Engineering design process applied to computer-aided mine planning and design.

Mine layouts, production planning, and materials scheduling optimization.

Prerequisites – Present: None

Proposed: Mi Eng 225 or graduate standing

CC 8235, Chemistry 1, General Chemistry. The following change is approved effective Spring 2013.

Catalog Description – Proposed: A comprehensive study of the general principles of chemistry with emphasis on the fundamental laws and their application in practical computations.

Credit Hours – Present: 3 hr. lecture, 1 hr. lab

Proposed: 2 hr. lecture, 2 hr. lab

CC 8236, Chemistry 202, Cooperative Work Training. New course approved effective Fall 2012.

Catalog Description: On-the-job experience gained through cooperative education with industry, with credit arranged through departmental advisor. Grade received depends on quality of reports submitted and work supervisor's evaluation.

Credit Hours: Variable 1-3

Prerequisites: None

CC 8237, Chemistry 410, Seminar. The following change is approved effective Fall 2012.

Credit Hours – Present: Variable 0-6

Proposed: 1 hr. lecture

CC 8238, Chemistry 433, Nanomaterials – Synthesis, Properties & Applications. New course approved effective Fall 2012.

Catalog Description: Chemistry of nanomaterials. Understanding the fundamentals of nanoscience and technology. Studying the different synthesis strategies for nanomaterials and their characterization. Understanding the properties of nanomaterials and their possible applications. Introducing the concept for device fabrication.

Credit Hours: 3 hour lecture

Prerequisites: Chem 331

CC 8239, Chemistry 458, Principles and Applications of Mass Spectrometry. The following change is approved effective Fall 2012.

Prerequisites – Present: Chem 251 or equivalent

Proposed: Chem 355 or equivalent

**For the information of the Faculty Senate, the following EC forms have been submitted by the University departments for an experimental course that will be offered in the near future.**

**Approved EC forms:**

EC 2404, Architectural Engineering 301, Civil Engineering 301, Structural Masonry, approved effective Fall 2012.

Course Description: Review of the theory and practice of analyzing low-rise masonry structures. Materials and assembly types, constructability considerations, structural masonry components, repair and strengthening, and model code requirements to ensure adequate load resisting buildings.

Credit Hours: 3 hr. lecture

Prerequisites: ArchE 217 or CE 217

EC 2405, Explosives Engineering 301, Display Fireworks Manufacturing, approved effective Fall 2012.

Course Description: Theory and practice of manufacturing display fireworks. Focusing on safety, chemical interaction, color development, basic theory, state and federal law. The lab will include hands-on building of ball and canister shells and other pyrotechnic effects.

Credit Hours: 1 hr. lecture, 2 hr. lab

Prerequisites: Chem 1 and Chem 2 and Chem 4 and one of Econ 121, Econ 122, Eng Mgt 137

EC 2406, Biological Sciences 201, Molecular Biology of Sleep and Motivated Behaviors, approved effective Spring 2013.

Course Description; Students will learn the genes, proteins, and anatomy that govern sleep regulation. The course will also cover how sleep deprivation changes the body and degrades health and performance. Lessons from sleep will transfer to behaviors such as feeding and mating.

Credit Hours: 3 hr. lecture

Prerequisites: Bio Sci 111

EC 2407, Philosophy 101, Philosophy and Film, approved effective Summer 2012.

Course Description: This is an introductory philosophy course where students will be introduced through film to such topics as relativism and truth, personal identity, philosophy of mind and artificial intelligence, ethical theory, political philosophy, and the problem of evil.

Credit Hours: 3 hr. lecture

Prerequisites: None

---

Daniel Tauritz, Chair  
Missouri S&T Campus Curricula Committee