

Memo To: Faculty Senate  
From: Missouri S&T Campus Curriculum Committee Meetings  
RE: May 6, 2008 Meeting

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

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

**Approved CC forms:**

CC 7430, Engineering Management 409, Design for Six Sigma. New course approved effective Spring 2009.

Catalog Description: The course will cover modern design methodology based on the Six Sigma paradigm. Design for Six Sigma (DFSS) is a roadmap for the development of robust products.

Credit Hours: 3 hour lecture

Prerequisites: Emgt 309 and Emgt 375

CC 7431, Math 6, Trigonometry. The following change is approved effective Fall 2008.

Prerequisites – Present: By placement exam

Proposed: Math 2 or 4 with a grade of “C” or better; or by placement exam

CC 7432, Math 8, Calculus with Analytic Geometry I. The following change is approved effective Fall 2008.

Prerequisites – Present: Math 6 and either of Math 2 or 4 with a grade of “C” or better; or by placement exam.

Proposed: Math 6; Math 2 or 4, both with a grade of “C”; or by placement exam.

CC 7433, Math 14, Calculus for Engineers I. The following change is approved effective Fall 2008.

Prerequisites – Present: Math 6 and either of Math 2 or 4 with a grade of “C” or better; or by placement exam.

Proposed: Math 6; Math 2 or 4, both with a grade of “C”; or by placement exam. Math 14 may be accompanied by Math 6 with advisor’s approval.

CC 7434, Math 22, Calculus with Analytic Geometry III. The following change is approved effective Fall 2008.

Catalog Description – Proposed: An introduction to multivariable calculus. Vector valued functions, curves and surfaces in two and three dimensions, partial differentiation, multiple integration, line and surface integrals, the major theorems of vector calculus, and applications of these ideas are studied.

CC 7435, Math 210, Undergraduate Seminar. New course approved effective Fall 2008.

Catalog Description: Discussion of advanced or current topics. (Course cannot be used for graduate credit).

Credit Hours: Variable 1 – 3

Prerequisites: None

CC 7436, Math 310, Undergraduate Seminar. New course approved effective Fall 2008.

Catalog Description: Discussion of advanced or current topics. (Course cannot be used for graduate credit).

Credit Hours: Variable 1 – 3

Prerequisites: Senior Standing

CC 7437, Math 209, Foundations of Mathematics. The following changes are approved effective Fall 2008.

Catalog Description – Proposed: Introduction to mathematical reasoning through an axiomatic development of mathematical systems. Strong emphasis is placed on learning to understand what constitutes a sound mathematical argument. Communication, both written and spoken, is emphasized.

Prerequisites – Present: Math 15 or 21 or 22 with a grade of “C” or better

Proposed: Math 15 or 21 with a grade of “C” or better

CC 7440, Petroleum Engineering 331, Drilling and Well Design. The following change is approved effective Fall 2008.

Prerequisites – Present: IDE 110; preceded or accompanied by CE 230

Proposed: Preceded or accompanied by CE 230

CC 7442, Metallurgical Engineering 121, Metallurgy for Engineers. The following change is approved effective Fall 2008.

Prerequisites – Present: Chem 1

Proposed: Preceded or accompanied by Chem 1

CC 7443, Metallurgical Engineering 313, Scanning Electron Microscopy. The following change is approved effective Fall 2008.

Prerequisites – Present: Met 215 and 216 or course in optical microscopy – consent of instructor required.  
Proposed: Met 217 and 218 or course in optical microscopy – consent of instructor required.

CC 7444, Metallurgical Engineering 381, Chemical Engineering 381, Corrosion and Its Prevention. The following change is approved effective Fall 2008.

Prerequisites – Present: Chem 243 or Met 281  
Proposed: Chem 243 or Cer 259

CC 7447, Geological Engineering 331, Subsurface Hydrology. The following change is approved effective Spring 2009.

Prerequisites – Present: Ge Eng 50  
Proposed: Ge Eng 50, Math 204

CC 7448, Education 370, Teachers' Academy: Effective Instructional Strategies. New course approved effective Fall 2008.

Catalog Description: Participants will develop an understanding of research-based instruction and the ability to implement the instructional strategies in their classrooms. In addition to effective instructional practices, the teachers' academy will focus on leadership, empowerment, collaboration and renewal.

Credit Hours: 3 hour lecture

Prerequisites: Graduate standing

CC 7451, IST 353, Computer Science 332, Modular Software Systems in Java. The following changes are approved effective Fall 2008.

Title – Proposed: Modular Software Systems in Java

Catalog Description – Proposed: Introduction to Software Life Cycle and characteristics of large modular software systems. Exploration of software support for such systems, using Java, including use of GUI interfaces, advanced I/O and String handling, Interfaces, Threads, and other modularity features. Program project included.

Prerequisites – Present: Cs 253 or IST 151

Proposed: IST 151 and IST 231

Co-listing: Removing Computer Science 332 as co-listing

**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 2057, Business 401, Applied Business Project, approved effective Spring 2009.

Course Description: The course ties business theory to real-world company problems in a team competitive environment. Companies submit problems that require analysis of market feasibility and introduction planning for a new product or service. The project provides the students an opportunity to apply a cross-functional approach to a real project.

Credit Hours: 3 hour lecture

Prerequisites: Business 426

EC 2059, Geological Engineering 301, Introduction to International Engineering & Design, approved effective Fall 2008.

Course Description: A multi-disciplinary design course focused on sustainable design and technology transfer to developing countries. Students will develop a work plan to address design objectives and other considerations including scheduling, budgeting, environmental impacts, and life cycle design.

Credit Hours: 2 hour lecture

Prerequisites: Senior standing, instructor approval, accompanied by Introduction to International Engineering & Design Laboratory

EC 2060, Geological Engineering 301, Introduction to International Engineering & Design Laboratory, approved effective Fall 2008.

Course Description: A multi-disciplinary design course focused on sustainable design and technology transfer to developing countries. Students will develop a work plan to address design objectives and other considerations including scheduling, budgeting, environmental impacts, and life cycle design.

Credit Hours: 1 hour lab

Prerequisites: Senior standing, instructor approval, accompanied by introduction to International Engineering & Design Lecture

EC 2061, ALP 101, The Global Village, approved effective Fall 2008.

Course Description: Residential College course explores connections among language, art, and culture at regional, national, and international scales. It aims to complement existing cross-cultural programs on campus while encouraging formal and informal interactions among students, faculty, alumni, and the campus community.

Credit Hours: 0.5 hour lecture

Prerequisites: None

EC 2062, ALP 101, The Global Village, approved effective Spring 2009.

Course Description: Residential College course explores connections among language, art, and culture at regional, national, and international scales. It aims to complement existing cross-cultural programs on campus while encouraging formal and informal interaction among students, faculty, alumni, and the campus community.

Credit Hours: 0.5 hour lecture

Prerequisites: None

EC 2062, Engr 101, Honors Academy Living & Learning, approved Fall 2008.

Course Description: Honors Academy Living & Learning provides students an opportunity to participate in the New Student Honors Seminar for half the class and the other half is spent working in small-groups on directed special projects and writing reflective journal articles on issues geared towards experiential and life-long learning, leadership and citizenship.

Credit Hours: 0.5 hour lecture

Prerequisites: None

EC 2063, Engr 101, Seeds of Success, approved effective Fall 2008.

Course Description: This is a residential learning community course which will focus on topics of leadership, professionalism, ethics and success strategies for college and beyond.

Credit Hours: 0.5 hour lecture

Prerequisites: None

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J. Keith Nisbett, Chair  
Missouri S&T Campus Curricula Committee