



Memo To: Faculty Senate  
From: Missouri S&T Campus Curriculum Committee Meeting  
RE: November 3, 2009 meeting

**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 0337, Master of Science in Computer Science, Pervasive and Mobile Computing, approved effective Spring 2010. A proposal to create a new emphasis area under the Master of Science in Computer Science called Pervasive and Mobile Computing.

DC 0338, Bachelor of Science in Computer Science, approved effective Fall 2010. A proposal to modify the current Bachelor of Science in Computer Science.

DC 0339, Bachelor of Science in Computer Science, approved effective Fall 2010. A proposal to modify the current Bachelor of Science in Computer Science.

**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 7734, Biological Sciences 370, Toxicology. The following change is approved effective Spring 2010.

Prerequisite – Present: Bio Sci 211 plus either Bio Sci 215 or 242

Proposed: Bio Sci 211, Bio 231, at least junior standing

CC 7736, Business 405, Advanced Accounting Essentials. The following changes are approved effective Spring 2010.

Course Title – Proposed: Graduate Accounting Essentials

Catalog Description: This course is an intro to the essentials of financial & managerial accounting for running a business. It's designed for students planning to enter the MBA program who need this area and for non-business students who want some business background. Credit cannot be applied to any major or minor in Business, IST, or Economics. Additional case study or report required.

CC 7737, Business 406, Graduate Management and business Law Essentials. The following change is effective Spring 2010.

Catalog Description – Proposed: This course is an intro to the essentials of management and business law for running a business. It's designed for students planning to enter the MBA program who need this area & for non-business students who want some business background. Credit cannot be applied to any major or minor in Business, IST, or Economics. Additional case study or report required.

CC 7738, Marketing 407, Marketing and Strategy Essentials. The following changes are approved effective Spring 2010.

Course Title – Proposed: Graduate Marketing and Strategy Essentials

Catalog Description – Proposed: This course is an intro to the essentials of marketing and strategy for running a business. It's designed for students planning to enter the MBA program who need this area and for non-business students who want some business background. Credit cannot be applied to any major or minor in Business, IST or Economics. Additional case study or report required.

CC 7739, Business 408, Graduate Operations Management Essentials. The following change is approved effective Spring 2010.

Catalog Description – Proposed: This course is an intro to the essentials of operations management for running a business. It is designed for students planning to enter the MBA program who need this area and for non-business students who want some business background. Credit cannot be applied to any major or minor in Business, IST, or Economic. Additional case study or report required.

CC 7740, Business 409, Graduate Mathematics and Statistics Essentials. The following change is approved effective Spring 2010.

Catalog Description – Proposed: This course is an intro to the essentials of mathematics & statistics for running a business. It is designed for students planning to enter the MBA program who need this area and for non-business students who want some business background. Credit cannot be applied to any major or minor in Business, IST, or Economics. Additional case study or report required.

CC 7741, Psychology 154, Psychology Personal Adjustment. Course deletion approved effective Spring 2010.

CC 7742, Psychology 246, Motivation and Emotion. Course deletion approved effective Spring 2010.

CC 7743, Biological Sciences 322, Pathogenic Microbio Lab. Course deletion approved effective Spring 2010.

CC 7744, Biological Sciences 365, Comparative Animal Physi. Course deletion approved effective Spring 2010.

CC 7745, Biological Sciences 376, Adv Bio Lab Tech II. Course deletion approved effective Spring 2010.

CC 7747, History 347, Orgns Mod Amer 1877-1920. Course deletion approved effective Spring 2010.

CC 7748, History 351, Amer Intellectual Hist I. Course deletion approved effective Spring 2010.

CC 7749, History 355, History of Black America. Course deletion approved effective Spring 2010.

CC 7750, History 356, Hist-The American City. Course deletion approved effective Spring 2010.

CC 7751, History 360, Hist of American Family. Course deletion approved effective spring 2010.

CC 7752, History 402, Rdgs Am Hist to 1865. Course deletion approved effective Spring 2010.

CC 7753, Political Science 250, State and Local Politics. Course deletion approved effective Spring 2010.

CC 7754, ERP 444, Essentials of Data Warehouses. New course approved effective Spring 2010.

Catalog Description: This course presents the topic of data warehouses and the value to the organization. It takes the student from the database platform to structuring a data warehouse environment. Focus is placed on simplicity and addressing the user community needs.

Credit Hours 3 hour lecture

Prerequisites: IST 223 or equivalent relational database experience

Co-listing: IST 444

CC 7755, Chemical Engineering 366, Chem Process Simulation. Course deletion approved effective Spring 2010.

CC 7756, Mining Engineering 340, Rock Mechanics II. Course deletion approved effective Spring 2010.

CC 7757, Mining Engineering 308, Drilling and Blasting. Course deletion approved effective Spring 2010.

CC 7758, Mining Engineering 405, Non-Explosives Rock Frag. Course deletion approved effective Spring 2010.

CC 7759, Biological Sciences 382, Neurobiology. New course approved effective Fall 2010.

Catalog Description: An intermediate course in cellular neurobiology. Emphasis will be placed on the unique properties of neurons and other excitable cells. Topics covered include the structure and biophysical properties of neurons, synaptic transmission, neurochemistry, signal transduction, neuropharmacology and neurodevelopment.

Credit Hours: 3 hour lecture

Prerequisites: Bio Sci 211

CC 7760, System Engineering 368, System Engineering and Analysis I. The following changes are approved effective Spring 2010.

Catalog Descriptions – Proposed: The concepts of Systems Engineering are introduced through a project. Students work in virtual teams. The topics covered are architecture development, basic system architectural design techniques, functional decomposition, design and technical review objectives, and initial specifications.

Co-listing: Remove Eng Mgt 368

CC 7761, System Engineering 411, Systems Engineering Management. The following changes are approved effective Spring 2010.

Course Title – Proposed: Systems Engineering Capstone

Catalog Description – Proposed: The topics covered are Systems Engineering Management Plan (SEMP), Systems Engineering processes, process re-engineering, standards, and systems engineering case studies. Students will apply the skills and theory that they mastered in previous five core courses to the analysis of assigned cases.

Prerequisites – Present: Graduate Standing

Proposed: SysEng 469, 412, 413. Can be taken concurrently with SysEng 469 with consent of instructor.

CC 7762, System Engineering 412, Complex Engineering Systems Project Management. The following changes are approved effective Spring 2010.

Catalog Description – Proposed: The course topics include issues specific to distributed project management, team development, resource management, constraint planning, development of Integrated Master Schedule and Integrated Master Plan, monitoring technical performance, schedule, cost, and risk.

Prerequisites – Present: Graduate Standing

Proposed: Sys Eng 468; Can be taken concurrently with Sys Eng 468 with consent of instructor.

CC 7763, System Engineering 413, Economic Analysis of Systems Engineering Projects. The following changes are approved effective Spring 2010.

Course Title – Proposed: Economic Analysis for Systems Engineering

Catalog Description – Proposed: Methods of economic evaluation for engineering projects involving complex systems. Economic impacts on choosing system alternatives, life cycle costing, economic decisions involving risk and uncertainty, and engineering cost estimation for projects in government, defense, and commercial industries.

Prerequisites – Present: Graduate Standing

Proposed: Sys Eng 368; can be taken concurrently with Sys Eng 368 with consent of instructor.

CC 7764, System Engineering 468, System Engineering 468. The following changes are approved effective Spring 2010.

Catalog Description – Proposed: This course uses customized case studies based on team projects from prior courses. Topics covered include physical and functional analysis, analysis and traceability of requirements and specifications, verification and validation, optimization, simulation, and trade studies.

Prerequisites – Present: None

Proposed: Sys Eng 368

CC 7765, System Engineering 469, Systems Architecting. The following changes are approved effective Spring 2010.

Catalog Description – Proposed: The objective of the course is to provide the basic tools and concepts of architecting complex engineering systems. Systems thinking, ambiguity in system architecting, search as an architecting process, SysML and DoDAF Architecting Framework, System of Systems and Network-Centric Architectures.

Prerequisites – Present: Graduate Standing

Proposed: Sys Eng 468; can be taken concurrently with Sys Eng 468 with consent of instructor.

CC 7766, Geology 211, Optical Mineralogy. Course deletion approved effective Spring 2010.

CC 7767, Geology 411, Advanced Mineralogy. Course deletion approved effective Spring 2010.

CC 7768, Computer Science 433, Theory of Compiling. Course deletion approved effective Spring 2010.

CC 7769, Engineering Management 317, Compar & Multi-Natl Mgt. Course deletion approved effective Spring 2010.

CC 7770, Engineering Management 389, Packaging Materials II. Course deletion approved effective Spring 2010.

CC 7774, Ceramic Engineering 201, Special Topics. New course approved effective Spring 2010.

Catalog Description: This course is designed to give the department an opportunity to test a new course. Variable Title.

Credit Hours: 0-6

Prerequisites: None

CC 7775, Physics 4, Concepts in Physics. Course deletion approved effective Spring 2010.

CC 7776, Physics 5, Concepts in Physics Lab. Course deletion approved effective Spring 2010.

CC 7777, Physics 7, Environmental Physics II. Course deletion approved effective Spring 2010.

CC 7778, Physics 27, General Physics Lab. Course deletion approved effective Spring 2010.

CC 7779, Physics 28, General Physics Lab. Course deletion approved effective Spring 2010.

CC 7780, Physics 337, Atmospheric Science. Course deletion approved effective Spring 2010.

CC 7781, Physics 435, Cloud Physics. Course deletion approved effective Spring 2010.

CC 7782, Chemistry 447, Statistical Thermodynamic. Course deletion approved effective Spring 2010.

CC 7783, Chemistry 442, Neutron Diffraction. Course deletion approved effective Spring 2010.

CC 7784, Chemistry 431, Inorganic Reaction Mechs. Course deletion approved effective Spring 2010.

CC 7785, Chemistry 421, Adv Organic Chemistry. Course deletion approved effective Spring 2010.

CC 7786, Chemistry 212, Science Teaching. Course deletion approved effective Spring 2010.

CC 7787, Sociology 260, Deviant Behavior. Course deletion approved effective Spring 2010.

CC 7788, Sociology 281, Family and Marriage. Course deletion approved effective Spring 2010.

CC 7789, Sociology 100, Special Problems. Course deletion approved effective Spring 2010.

CC 7790, Sociology 101, Special Topics. Course deletion approved effective Spring 2010.

CC 7791, Sociology 105, Social Organization. Course deletion approved effective Spring 2010.

CC 7792, Sociology 200, Special Problems. Course deletion approved effective Spring 2010.

CC 7793, Sociology 201, Special Topics. Course deletion approved effective Spring 2010.

CC 7794, Sociology 210, Seminar. Course deletion approved effective Spring 2010.

CC 7795, Sociology 300, Special Problems. Course deletion approved effective Spring 2010.

CC 7796, Sociology 301, Special Problems. Course deletion approved effective Spring 2010.

CC 7797, Sociology 310, Seminar. Course deletion approved effective Spring 2010.

CC 7798, German 90, Scientific German. Course deletion approved effective Spring 2010.

CC 7799, German 180, Basic German Composition. Course deletion approved effective spring 2010.

CC 7800, German 311, Advanced German Conversation. Course deletion approved effective Spring 2010.

CC 7801, German 402, Beg Ger for Grad Students. Course deletion approved effective Spring 2010.

CC 7802, French 378, French Theater. Course deletion approved effective Spring 2010.

CC 7803, Spanish 371, Surv of Span Am Lit. Course deletion approved effective Spring 2010.

CC 7804, Spanish 60, Hispanic Civilization. Course deletion approved effective Spring 2010.

CC 7805, Music 61, Fundamentals of Music. Course deletion approved effective Spring 2010.

CC 7806, Music 152, Survey Contemporary Music. Course deletion approved effective Spring 2010.

CC 7807, Music 155, Music in the U.S.. Course deletion approved effective Spring 2010.

CC 7808, Art 251, Genre Studies Film & Lit.. Course deletion approved effective Spring 2010.

CC 7809, Art 255, Script to Screen. Course deletion approved effective Spring 2010.



CC 7811, Eng Mech 202, Coop Engr Training. Course deletion approved effective Spring 2010.

CC 7812, Eng Mech 311, Intro to Continuum Mech. Course deletion approved effective 2010.

CC 7813, Eng Mech 341, Exper Stress Analysis I. Course deletion approved effective Spring 2010.

CC 7814, Eng Mech 373, Advance Dynamics. Course deletion approved effective Spring 2010.

CC 7815, Eng Mech 390, Undergraduate Research. Course deletion approved effective Spring 2010.

CC 7816, Eng Mech 463, Theo of Random Vibration. Course deletion approved effective Spring 2010.

CC 7817, Eng Mech 487, Finite Element Approx III. Course deletion approved effective Spring 2010.

CC 7819, Eng Mech 10, Intro to Engineering. Course deletion approved effective Spring 2010.

CC 7820, Eng Mech 201, Special Topics. Course deletion approved effective Spring 2010.

CC 7821, Eng Mech 300, Special Problems. Course deletion approved effective Spring 2010.

CC 7822, Eng Mech 301, Special Topics. Course deletion approved effective Spring 2010.

CC 7823, Eng Mech 307, Finite Element Approx I. Course deletion approved effective Spring 2010.

CC 7824, Eng Mech 310, Seminar. Course deletion approved effective Spring 2010.

CC 7825, Eng Mech 322, Intro to Solid Mechanics. Course deletion approved effective Spring 2010.

CC 7826, Eng Mech 329, Smart Materials and Sensor. Course deletion approve effective Spring 2010.

CC 7827, Eng Mech 334, Stability of Engr Struct. Course deletion approved effective Spring 2010.

CC 7828, Eng Mech 336, Fracture Mechanics. Course deletion approved effective Spring 2010.

CC 7829, Eng Mech 337, Fatigue Analysis. Course deletion approved effective Spring 2010.

CC 7830, Eng Mech 361, Vibrations I. Course deletion approved effective Spring 2010.

CC 7831, Eng Mech 381, Intro Comp Mtrls/Struc. Course deletion approved effective Spring 2010.

CC 7832, Eng Mech 400, Special Problems. Course deletion approved effective Spring 2010.

CC 7833, Eng Mech 401, Special Topics. Course deletion approved effective Spring 2010.

CC 7834, Eng Mech 408, Finite Element Approx II. Course deletion approved effective Spring 2010.

CC 7835, Eng Mech 410, Seminar. Course deletion approved effective Spring 2010.

CC 7836, Eng Mech 431, Theory of Plates. Course deletion approved effective Spring 2010.

CC 7837, Eng Mech 432, Theory of Shells. Course deletion approved effective Spring 2010.

CC 7838, Eng Mech 436, Adv Fracture Mechanics. Course deletion approved effective Spring 2010.

CC 7839, Eng Mech 462, Theory of Vibrations II. Course deletion approved effective Spring 2010.

CC 7840, Eng Mech 483, Mech/Composite Materials. Course deletion approved effective Spring 2010.

CC 7841, Eng Mech 484, Analysis Lamin Comp Stru. Course deletion approved effective Spring 2010.

CC 7842, Eng Mech 490, Research. Course deletion approved effective Spring 2010.

CC 7843, Eng Mech 493, Oral Examination. Course deletion approved effective Spring 2010.

CC 7844, Eng Mech 495, Continuous Registration. Course deletion approved effective Spring 2010.

CC 7856, Music 171, Intro Electronic Music. Course deletion approved effective Spring 2010.

**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 2202, Biological Sciences 401, Advanced Toxicology, approved effective Spring 2010.

Course Description: A study of natural and man-made toxicants, various possible routes of exposure, absorption, distribution, biotransformation, specific target sites, and mechanisms involved in elicitation of toxic effects, as well as detoxification and excretion. Independent research projects and primary literature readings are required.

Credit Hours: 3 hour lecture

Prerequisites: Graduate standing, Bio 211, Bio 231

EC 2203, GE 201, Geology and Engineering of Ancient and Modern Peru, approved effective Spring 2010.

Course Description: a study of the geological engineering of the Cuzco-Machu Picchu corridor, including the inter-relations of geology, climate, archeology, and history. A technical report and a week-long field trip to Peru during Spring Break are required.

Credit Hours: 1 hour lecture

Prerequisites: None

EC 2204, GE 401, Surface Waves & Ground Penetrating Radar, approved effective Spring 2010.

Course Description: Basic theory and the acquisition, processing and interpretation of surface waves (MASW and ReMi) and ground penetrating radar (GPR) data are covered. Emphasis is placed on geotechnical and structural applications of these non-invasive imaging technologies. Numerous case studies are presented in order to illustrate the utility of these geophysical tools.

Prerequisites: GE 50 or CE 215 or equivalent, and graduate standing

EC 2205, Ceramic Engineering 201, Applied Glass Forming, approved effective Spring 2010.

Course Description: Examines the properties and behavior of molten glass along with basic forming techniques, including off-hand shaping, molding and casting.

Credit Hours: 1 hour lecture, 1 hour lab, Total: 2 hours

Prerequisites: Cer 104 or Met 125; freshmen, sophomore, or junior only or by instructor.

EC 2207, Geological Engineering 401, Civil Engineering 401, Inca Civilization Geotechnical Engineering Practices, approved effective Spring 2010.

Course Description: An in-depth study of geotechnical engineering practices within the Cuzco-Machu Picchu corridor, with emphasis on the inter-relationships between tectonics, geology, geomorphology, climate, hydrology, agriculture, quarrying, construction practices, irrigation, culture and history. A week-long field trip to Peru during Spring Break is required.

Credit Hours: 3 hour lecture

Prerequisites: GE 50 or CE 215 or equivalent, and graduate standing.

EC 2208, Electrical Engineering 301, Electric-Drive Vehicles, approved effective Spring 2010.

Course Description: this course covers introductory topics related to the understanding and analysis of electric, hybrid, and plug-in hybrid power trains. In specific, classification of hybrid drive trains, driving cycles, energy storage systems, mechanical coupling devices, automotive applications of fuel cells, and introduction to power converters will be covered.

Credit Hours: 3 hour lecture

Prerequisites: Senior Standing in Science or Engineering

EC 2209, Statistics 401, Survival Analysis, approved effective Fall 2010.

Course Description: Students will be introduced to methods for analyzing survival distributions, mathematical and graphical evaluations of goodness of fit, comparison of treatment groups, proportional hazards models, censoring mechanisms, recurrent events, and actuarial science applications.

Credit Hours: 3 hour lecture

Prerequisites: Stat 343

EC 2217, Biological Sciences 301, Cancer Cell Biology, approved effective Fall 2010.

Course Description: Advanced cell biology course examining cellular processes that go awry during tumorigenesis. We will discuss cell cycle controls, signal transduction pathways, DNA repair, telomerase, apoptosis, cell migration and adhesion that are altered in cancer cells.

Credit Hours: 3 hour lecture

Prerequisites: Bio Sci 211

EC 2218, Biological Sciences 401, Advanced Cancer Cell Biology, approved effective Fall 2010.

Course Description: Graduate cell biology course examining cellular processes that go awry during tumorigenesis. We will discuss cell cycle controls, signal transduction pathways, DNA repair, telomerase, apoptosis, cell migration and adhesion that are altered in cancer cells. In addition to lecture, will include a weekly section to examine primary cancer literature.

Credit Hours: 3 hour lecture

Prerequisites: Bio Sci 211

EC 2221, Biological Sciences 101, Genetics: Decoding your genes, approved effective Fall 2010.

Course Description: We will explore the questions: What are genes? How do our genes affect our health? How are genes inherited? What are the societal implications of genetic knowledge? What is the Human Genome Project and what can we learn from it? (Does not fulfill requirement for Biology majors).

Credit Hours: 3 hour lecture

Prerequisites: None

---

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

