

Minutes of the I.T. Curriculum Committee September 19, 2005

Present: J. Carlis (CSE), P. Cushman (Phys), D. Frank (Math&Chair), B. He (BME), P. Hudleston (ITSA), L. Kinney (ECE), J. Labuz (CE), Ann Pineles (ITLD), T. Shield (AEM), D. Shores (CEMS), J. Stout (Geo/Geophysics), P. Strykowski (ME), K. Yin (BioBased Products).

1. Minutes of April 25, 2005 meeting were APPROVED with this change: For ME 4054W, delete 3322 from the list of prereqs
2. Dean Hudleston informed the committee that four IT faculty members (Alon McCormick, John Carlis, Phil Barry and Tom Kuehn) are working with the writing center, acting as consultants for writing courses and helping to plan writing courses.
3. Dean Hudleston gave an update on PCAS (Program & Curriculum Approval System). It will feed into the grad planner that is under development. Changes in program requirements will have to be made through PCAS, much like course information is entered into ECAS.
4. Actions on courses were taken; see chart below.

(shaded items for information only)

In red – comments from a previous meeting or provisional approval

SP = Semester Prerequisite

Course	Title	Current	Proposed	Approved/ Comments
AEM 3031	Deformable Body Mechanics	SP: [2011 or 2021 or [BMEN 3001, BMEN major]], [Math 2373 or equiv], [&Math 2374 or equiv], IT Enforced SP: [AEM 2011 or 2021 or [BME	SP: [2011 or 2021 or [BMEN 3001, BMEN major]], [Math 2374 or equiv], [&Math 2373 or equiv], IT Enforced SP: [AEM 2011 or 2021 or [BMEN 3001 and BMEN major]], [MATH 2374 or Math 2263 or Math 2573H, [concurrent enrollment Math 2373 or concurrent enrollment Math 2243 or concurrent enrollment Math 2574H], IT Stu	Approved
BME 3001	Biomechanics	Auto Enroll: No	Auto Enroll: yes	Approved
BME 3201	Bioelectricity and Bioinstrumentation	Auto Enroll: No	Auto Enroll: yes	Approved
BME 5351	Cell Engineering	SP: 5301 or equiv, 5310 or equiv, 5201 or equiv, IT upper div or grad student or #	SP: Math 2243 or Math 2373, CSCI 1107, 2501 or 5501 or IT upper div or grad student or Instructor permission	Approved Provisional approval 5/10/05

Course	Title	Current	Proposed	Approved/ Comments
BME 5910	Special Topics in Biomedical Engineering		Is the intent to change the title of the course to: Special Topics in Biomedical Engineering (Intro to Bio MEMS and Medical Devices) Or to add "Intro to Bio MEMS and Medical Devices" as a topic?	??
CE 4011	Special Topics		New Course: 1-4 cr, A-F Only Grade Base, Lect, Allow up to 3 repetition(s) totaling up to 12.0 credit(s). Topics and credits vary SP: Upper division IT Equiv: GeoE 4011 Offered all terms	Number needs to be changed if course can be repeated
CE 4211	Traffic Engineering		New Course: 3 cr, Stdnt Opt Grade Base, Lect, Principles of vehicle and driver performance as they apply to the safe and efficient operation of highways. Design and use of traffic control devices. Capacity and level of service. Trip generation and traffic impact analysis. Safety and traffic studies. SP: 3201, Stat 3021 or equiv Enforced SP: IT upper division Offered spring term Note: This course separates undergrads from grads in 5xxx course.	Approved. Note that these is also a CE 5211
CE 4413	Prestressed Concrete Design	New Title: Prestressed Concrete Design Design of steel and composite steel/concrete structures, including multistory frames and plate-girders bridges. Beam-columns, torsion, connections, frames. SP: [Grade of at least C- in 4401, [upper div IT or grad student]] or #; 4411 recommended	Old Title: Steel Design II Design of prestressed concrete structures. Time dependent effects, behavior, flexure, shear, torsion, deflections, continuous systems. SP: [Grade of at least C- in 4401, [upper div IT or grad student]] or #; 4412 recommended	Approved.
CE 4415	Masonry Structures	Old Number: CE 5413	New Number CE 4415 Offered fall, not every year	Approved. This is a 5xxx → 4xxx change. Note old number was 5415.
CE 4591	Environmental Law for Engineers	Old Number: CE 5591	New Number CE 4591	Approved. This is a 5xxx → 4xxx change

Course	Title	Current	Proposed	Approved/ Comments
Chem 4001	Chemistry of Plant Materials		New Course: 3 cr, A-F or Audit Grade Base, Lect, Chemical principles underlying structure, properties, processing, and performance of plant materials. SP: [[1002 or WPS 1301], Chem 2301, Chem 2302] or # Note: this is Chem version of BP 4001, with which it is cross-listed.	Table. Prov. Approval 5/26/05
Chem 4301	Surface and Colloid Science in Bio-based Products Manufacturing		New Course: 3 cr, Stdnt Opt Grade Base, Lect, Principles of surface/colloid science, their application to understanding manufacturing/performance of bio-based products. SP: Chem 3501, ME 3321 Equiv: BP 4301 Note: This course is being added only to be crosslisted with BP 4301	Table.
CSci 3970	Industrial Student Co-op Assignment	IAS (with final exam) Acad. Prog Units: Not allowed to bypass limits Allow up to 4 repeats (up to 8 total credits)	IAS (no final exam) Acad. Prog Units: Allowed to bypass limits. 13 cr Allow up to 2 repeats (up to 4 total credits)	Approved. Provisional approval 5/19/05
EE 3102	Circuits and Electronics Lab II	SP: [3101, IT] or ?	SP: [3101, IT] or ?attendance first day of class required	Approved
EE 3601	Transmission Lines, Fields & Waves	Old Title: Transmission Lines	New Title: Transmission Lines, Fields & Waves	Approved.
EE 4721	Introduction to Power System Analysis	4 cr, 4 Contact Hours, Comp 1: Lab, Comp 2: Lect, Auto Enroll: Yes, Graded Comp: Lab Enforced SP: None	3 cr, 3 Contact Hours, Comp 1: Lect, Comp 2: blank, Auto Enroll: No, Graded Comp: Lect Enforced SP: Sr EE or CompE major	Approved. (Separate lecture and lab)
EE 4722	Power System Analysis Laboratory		New Course: 1 cr, Stdnt Opt Grade Base, Lab Laboratory analysis dealing with AC power systems; analysis of power system networks; power flow analysis, short circuit analysis, & transient stability analysis. SP: 4721 or concurrent Enforced SP: Sr EE or CompE major Note: Formerly a component of EE 4721. Now separate course.	Approved. (Separate lecture and lab)
EE 4724	Power System Planning & Operation		New Course: 3 cr, Stdnt Opt Grade Base, Lect. Engineering considerations of economics, expansion & reliability of power systems; analysis of costs & scheduling of generation sources; planning for system reliability &	Approved.

Course	Title	Current	Proposed	Approved/ Comments
			operation of power systems to maintain reliability. SP: 4721 Offered spring	
EE 4951W		SP: 3015, 3115, 3601	SP: 3015, 3115, 3102, 3601, attendance first day of class required	
EE 5333	Analog Integrated Circuit Design	3 cr, 3 Contact Hours Fundamental circuits for analog signal processing. Design issues associated with MOS/BJT devices. Design/testing of circuits. Selected topics (e.g., modeling of basic IC components, design of operational amplifier or comparator or analog sampled-data circuit filter). SP: [3115, IT grad student] or ?	4 cr, 4 Contact Hours Fundamental circuits for analog signal processing. Design issues associated with MOS/BJT devices. Design/testing of circuits. Selected topics (e.g., modeling of basic IC components, design of operational amplifier or comparator or analog sampled-data circuit filter). Project design and simulation required SP: [3115, IT grad student] or instructor consent	Tabled at EE request
EE 5628	Fiber Optics Laboratory		New Course: 1 cr, Stdnt Opt Grade Base, Lab Experiments in fiber optics, including principles of dielectric waveguides, modes in optical fibers, fiber dispersion and attenuation, properties of light sources and detectors, and optical communication systems. SP: EE 5627 or &, IT grad student, or instructor consent Enforced SP: IT grad student Offered spring even years	Approved. Delete & from SP. (??)
EE 5632	Photonic Communication Devices and Systems	Inactive SP: 5163 or 5624 or equiv or inst consent, No instructor consent req. Enforced SP: Exclude fr or soph 5000 level	Active?? SP: [5163 or 5624 or equiv, IT grad] or #, Instructor consent req. Enforced SP: IT grad or #	Approved.
Geo 1005	Geology and Cinema	A-F or Audit Grade Base	Stdnt Opt Grade Base	Approved.
GeoE 4011	Special Topics		New Course: 1-4 cr, A-F Only Grade Base, Lect, Allow up to 3 repetition(s) totaling up to 12.0 credit(s). Topics and credits vary SP: Upper division IT Equiv: CE 4011 (not entered in ECAS) Offered all terms	Concerned about number. Compare CE 4011 above.
IofT 1311	Engineering Basics		New Course: 2.0cr; A-F only Elements of engineering. Philosophy, tools, practice. Role of engineering in society. Engineering's relationship to science. Modeling, mathematical analysis, software tools,	Should title be Engineering Basics or Beginning

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			hands-on design-and-build project. Students work in teams. SP: IT lower div or #	Engineering??
Math 5445	Mathematical Analysis of Biological Networks		New Course: 4 cr, Stdnt Opt Grade Base, Lect, Development and analysis of models for complex biological networks. Examples taken from signal transduction networks, metabolic networks, gene control networks, and ecological networks. SP: Linear Algebra and Differential Equations Offered spring term	Approved.
ME 4043W	Industrial Assignment II	Old Title: Industrial Assignment III A-F or Audit Grade Base Acad Prog. Units 12 CCE Cat: ME 4043. Industrial Assignment III. (4 cr, 4042, ME Co-op student) SP: 4042	New Title: Industrial Assignment II A-F Only Grade Base Acad Prog. Units 4 CCE Cat: ME 4043. Industrial Assignment II. (4 cr, 3041, ME Co-op student) SP: 3041	Approved. Acad Prog units should be 12
ME 4044	Industrial Assignment III		New Course: 2 cr, A-F Only Grade Base, IAS (no final), Acad Prog. Units 2 Industrial work assignment in engineering co-op program. Evaluation based on student's formal written report covering the semester work assignment SP: ME upper division, registration in ME Co-op program	Approved. Acad Prog units should be 12
ME 4431W	Energy Conversion Systems Laboratory	SP: [[Grade of at least C in [3321, 3322 or 3324, 4031W]], [Upper div ME or grad student]], #	SP: 3333, 4031W, IT upper division or grad student. Meets CLE req of Writing Intensive.	Approved
ME 5312	Solar Thermal Technologies		New Course: 4 cr, A-F or Audit Grade Base, Lect, In this course we will start with consideration of solar energy itself, including radiation fundamentals, measurement, and data processing required to predict solar irradiance with respect to time, location and orientation. Then we will examine the characteristics of various components in solar thermal systems (with particular emphasis on flat plate and concentrating collectors, heat exchangers and thermal storage) to understand how they work and how their performance is influenced by their design. This will lead us to an examination of systems and system performance, including system design, predicted energy savings and economics. The focus will be on low-temperature applications for solar hot water, space heating	Approved

Course	Title	Current	Proposed	Approved/ Comments
			and water distillation. Concentrating solar energy, including solar thermo-chemical processes to produce hydrogen and solar power systems, and photovoltaics will be introduced. A solar design project will be assigned. SP: 3333, IT Upper Division or Grad Student Offered spring even years	
Phys 3071W	Laboratory-Based Physics for Teachers	Comp 1: Lab (no final exam)	Comp 1: Lab (final exam)	Approved

CDTL or CSci (Professional Masters) Courses

SENG 5708	Advanced Database Management	Old Title: Object-Oriented Databases	New Title: Advanced Database Management Offered every spring
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