Mechanical Engineering Majors,  
Industrial Engineering Majors  
ENGIN Students planning to be ME or IE Majors

Pre-Registration Notes  
November 2009 for the Spring 2010 Semester

Revised Registration Process  
RACs (Registration Access Codes) are no longer being used. Engineering students must, however, still see their advisors during the advising period, November 9-19, and must bring a copy of the signed Course Selection Form (CSF) to Dorothy Adams by November 19th to avoid having a hold placed on their records. Holds will not be lifted until Finals week. Students who will not be able see their advisor during the advising period should notify Dorothy Adams by November 13.

Course Offerings and Schedules, Spring 2010  
• New ME Tech Elective (ESD) Course. A new course, MIE 597D will be taught by Prof. Ian Grosse in Spring 2010.  
  M&I-Eng 597d Design of Biological Systems and Inspirations for Engineering Design  
  We will study the design of biological systems including biomaterials, from a mechanical, functional perspective. Fundamental mechanical limitations of organic systems will be discussed, as well as methods of comparative analysis, such as scaling and dimensional analysis. Of particular interest will be the morphological diversity of complex biological systems which seem to have similar mechanical performances. This suggests that the process of evolution produces a Pareto optimal set of distinct designs in which no single design is able to maximize multiple performance metrics. The trade-offs of mechanical performance metrics in nature’s designs and how they are accomplished (many-to-one mapping, decoupling, composite structures, redundancy, etc.) will serve as a basis for exploring mechanical engineering design issues. This course will not address cellular biomechanics.

• ME and IE Tech Elective Courses. MIE 485, Vibrations and MIE 562 Power System Design, will both be offered in Spring 2010. Course descriptions can be found on Spire. Other courses which satisfy Tech Elective requirements are listed below. Technical courses in engineering, math, computer science, kinesiology and natural science departments may be acceptable. Be sure to check prerequisites. See Professor Rinderle to obtain approval.
  ME Tech Electives: MIE 380, 422, 460, 477, 485, 562, 570 and 597D are offered.  
  IE Tech Electives: MIE 230, 310, 313, and 397B are offered Spr 2010.

• MIE Elective. Math 235 satisfies the MIE Elective requirement in ME. Chem 112 satisfies the requirement for ME and IE students. Many technical and business related courses outside MIE can be used to satisfy the MIE Elective Requirement. See Professor Rinderle for approval.

• SD Courses. Current ME students who have taken MIE 213 will complete the SD requirement by taking MIE 497B, a 2 credit condensed version of MIE 415.

• Honors Section of Engin 351. 351H can be used in place of any departmental honors colloquium to satisfy an ME or IE Departmental honors requirement.

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Pre-Registration and Academic Advising Reports

- **Register Early/Registration Problems/Waitlists.** Register as soon as your Spire enrollment appointment opens if you need a specific class or section. Many required courses, including most design and lab classes are offered both semesters. Students who cannot enroll in a specific class this semester will be accommodated in the next semester. If a specific course is essential and if you cannot enroll for any reason, please see Dorothy Adams in ELab 208F immediately.

- **Notify the Department About Problems.** Please contact Dorothy Adams immediately if problems arise. Some problems might be resolvable if we are notified early.

- **Academic Advising Report and Major Status.** This report is used for graduation clearances. Make sure that all exceptions, transfer credits, and test credits are properly recorded. See Greg Brown (transfer courses) or Professor Rinderle about any errors.

## Course Schedules, Fall 2010 and Spring 2011

### ME and IE

- A scheduling grid is shown to the right. Plan now for future semesters.

### Industrial Eng. Majors (and PRE-ENGINS intending IE)

- Courses are not offered every semester. To preserve flexibility, IE students are advised to consider taking the IE required courses for which they qualify.

### Curriculum Planning

- Because not all required courses are offered every semester or even as shown on the flow chart, it is critical that students plan their programs in advance. The flow charts are only guides. Advisors offer assistance in this process, but they do not plan the student’s course of studies. **Please inform Dorothy now about any problems that arise from anticipated course offerings.**

- IE students should discuss the selection of IE Technical Electives with their advisors. See Professor Rinderle for approval of non MIE courses.

- Students should consider elective courses whenever they qualify. Postponing elective until your final semester may effectively eliminate your ability to choose electives.

### ME and IE Seniors

- Graduating seniors should check their Graduation Dates and Academic Advising Report to verify that all degree requirements will be satisfied.