Mechanical Engineering Students
Fall 2016 Advising & Registration Directions

ADVISING

Open Advising is Wednesday, March 23rd to Monday, April 4th. Please meet with an advisor during these scheduled open hour times. You are not required to meet with your assigned faculty advisor. (Exceptions – MSU Athletes must see Dr. David Miller; Turkish Dual Degree Students must see Dr. Ruhul Amin.) Find a time that works in your schedule. Go to the office of the advisor that is scheduled at that time. Please refer to the ME Advising Calendar found on the M&IE Student Advising page for this schedule.

www.coe.montana.edu/mie/students/advising_forms/

Bring a completed flowsheet when you go to an advisor’s office for advising. Select the appropriate flowsheet from the advising table or print one from the M&IE Student Advising page. Put an X in courses you have successfully completed, an E in the courses you are enrolled in and circle the courses you propose to take Fall 2016 (and Summer 2016 if you plan to take Summer classes). If this is not completed before you enter the advisor’s office, you may be asked to leave, complete the form and return later for advising. Once the flowsheet has been reviewed and approved by the advisor you will be given your registration PIN to register for Summer and Fall 2016 classes.

If you miss advising during these times you will be required to schedule an appointment with your Faculty Advisor or Laura Andersen. This may delay your ability to register at your assigned time. See DegreeWorks for your assigned faculty advisor. If this is blank or an advisor from a previous major is listed, please see Laura Andersen in ROBH 220.

Graduation Information

Applications for Spring 2016 Graduation were due last October. If you applied to graduate Spring 2016, look at the notes in your DegreeWorks worksheet. If there is a note about a discrepancy see Laura Andersen in ROBH 220. If you are planning on graduating Spring 2016 and did not apply for graduation see Laura Andersen immediately.

Summer or Fall 2016 Graduation apps were due to the M&IE Office on February 10th. If you plan to graduate and have not applied for graduation please see Laura Andersen in ROBH 220 as soon as possible. Information for Spring 2017 graduation application will be emailed in early September.

CORE classes

The Core Completion Checklist is found on the M&IE Student Advising Page. Please check your DegreeWorks worksheet to determine which core classes you have completed and which ones you still need to take. For D, IA, IH and IS courses that are being offered for Fall 2016 please use the Schedule of Core Classes tool on the MyInfo Page.

RESTRICTED ENTRY COURSES
(Print restricted entry forms from the M&IE Student Advising page.)

The courses listed to the right require a restricted entry form for registration. Students are enrolled depending on degree requirements, time left until graduation and the time which the restricted entry form was submitted. Complete the form and bring it to Roberts Hall 220 by Friday April 8th.

EIND 413 – Ergonomics & Human Factors
ETME 410 – CNC & CAM Technology
ETME 415 – Design of Manufacturing/Tooling
ETME 422 – HVAC
ETME 430 – Fluid Power Systems
NEW Professional Electives

EMEC 430 – Introduction to Combustion – Lecture – TR 10:50-12:05 – Prerequisite – EMEC 321; Corequisite – EMEC 326
The understanding and control of combustion is essential throughout many fields of engineering. The importance of combustion is evident in our daily lives where it is an integral part of electricity production, transportation and industrial processes such as metals refining, cement manufacturing, curing ovens and waste disposal. Major pollutants are associated with combustion such as nitrogen oxides, carbon monoxide, sulfur oxides and particulate matter that can cause health hazards, smog, acid rain, global warming and ozone depletion. Engineers introduced to combustion processes in a professional elective course can find a myriad of opportunities to use their expertise. Furthermore, the field of combustion unites the thermal-fluid sciences in an intellectually intriguing and practical realm.

EMEC 436 – Computational Fluid Dynamics – Lecture – MW 4:10-6:00 – Prerequisites – M 274, EMEC 303, EGEN 335
Computational Fluid Dynamics (CFD) will apply advanced numerical methods and applied mathematics to solve complex fluid dynamics problems. Students will first learn about the governing equations for fluid systems, the Navier Stokes equations. They will then write their own incompressible Navier-Stokes solver in MATLAB. Using modest computational resources, they will get to experiment with how a fluid modeling software is built and works. In parallel, they will be trained to use a commercial fluid modeling software, such as Fluent. By building their own solver, they will understand in much greater detail the capabilities (and weaknesses) of commercial models. However, by also learning how to use the commercial software, students will be able to simulate fluid systems with more complex and/or interesting geometrical boundaries and forcings. The class time will involve a lot of in-class programming, so it is ideal to bring your laptop to class with MATLAB and Fluent installed.

EGEN 330 - Business Fundamentals for Technical Professionals – Lecture – MW 2:10-3:25 – Prerequisites – M171 or M165
EGEN 330 is the new permanent course number for previous special topics course EIND 491 – Business Fundamentals for Engineers. EGEN 330 is intended to be used for all non-IMSE majors in lieu of EGEN 325 – Engineering Economic Analysis. If you have previously taken EIND 491 or EGEN 325 you are not allowed to use EGEN 330 as ME Professional Elective.

NEW ME Professional Elective Policy

Professional electives taken in pursuit of the BS in Mechanical Engineering must be chosen from a track that defines an area of emphasis. Tracks are guides for students to broaden their knowledge in a particular area. Students who do not want to concentrate in a particular pre-defined area may choose the general track. Students must take a minimum of 15 credit hours. In order to obtain PE credit for courses noted in this policy, students must have successfully completed all the 100 and 200 level courses.

Possible Tracks are Biomedical, Computational Mechanics, Fluid & Thermal Systems, Manufacturing, Materials Engineering and Structural Systems. Access the full ME PE Policy online on the M&IE Advising Page http://bit.ly/1RrBCP4. This will provide a list of courses that are included in each of the mentioned tracks. Please be sure to ask about this new policy when you are meeting with your advisor! Certain tracks require taking PEs in the Junior year as well as the Senior year.

ME Professional Electives Offered Fall 2016

Please check the MyInfo Class Schedule or the ME Fall 2016 PE Offering sheet on the M&IE Advising Page for class times.

EMEC 403 – CAE IV: Design Integration
EMEC 405 – Finite Element Analysis
EMEC 424 – Cellular Mechanotransduction
EMEC 430 – Intro to Combustion
EMEC 436 – Computational Fluid Dynamics
EMAT 463 – Composite Materials
EMAT 464 – Biomedical Materials Engineering
ETME 410 – CNC & CAM Technology (Restricted Entry)
ETME 415 – Design for Manufacturing/Tooling (Restricted Entry)
ETME 422 – HVAC I (Restricted Entry)
ETME 430 – Fluid Power Systems (Restricted Entry)

ETME 470 – Renewable Energy Applications
EIND 413 – Ergonomics/Human Factors Eng (Rest Entry)
EIND 425 – Technology Entrepreneurship
EIND 434 – Project Management for Engineers
EGEN 330 – Business Fundamentals for Technical Professionals
EGEN 415 – Advanced Mechanic of Solids
ECHM 424 – Transport Analysis (prereq – EMEC 326)
EELE 371 – Microprocess Hardware & Software System
M441 – Numerical Linear Algebra & Optimization
BCH 441 - Biochemistry of Macromolecules