

October 2007 Newsbrief

October Newsbrief for Michigan Tech Engineering Fundamentals

Cohort Registration is starting soon. Cohorts are a group of 20-24 students that take Math, Physics and Engineering class together. This provides students with a learning community with common schedules. In addition, it allows students to take what they are learning in their math and physics classes and apply it to engineering.

To preview cohorts students will go to the following website:

https://www.banweb.mtu.edu/pls/owa/stu_cohorts.display_cohort_grid

To register for a cohort students will use banweb. Cohort Registration will be Oct. 18, 9pm to Oct. 19, 3pm.

Current ENG1001 Students

Students currently taking ENG1001 and MA1032 will sign up for a cohort that contains ENG1100, MA1161, and PH1100. The material covered in ENG1001 and ENG1100 is equivalent to the material covered in ENG1101. Topics covered in ENG1100 - Engineering Analysis include the design process, spatial visualization skills, an introduction to 3-D solid modeling using UGNX, and an introduction to programming using the Visual Basic Application of ExCEL.

Current ENG1101 Students

Students currently taking ENG1101, MA1160/1 or higher, and PH1100 will sign up for a cohort that contains ENG1102. ENG1102 – Engineering Modeling and Design incorporates a semester long design project while teaching students spatial visualization, 3-D modeling and computer programming.

Design project topics include:

- **Supermileage Vehicle** - Teams will develop a concept design for a "supermileage vehicle". These are single passenger vehicles that use small (3.5 hp) gas engines and get incredible mileage (up to 3000 mpg). The basic project follows the SAE Supermileage competition rules. Teams create designs using UGNX-3 and simulate their performance with programs written in Matlab.
- **Microbrewing** – Students develop a turn-key brewing line with sufficient automation to allow novice, part-time brewers to make batches of basic ale recipes. Students will implement innovations to help give this potential new brewing line the best chance for commercial success.
- **Ethanol Production** - Students will examine the viability of a biomass-to-ethanol process using regional timber resources. Using principles of sustainable design, they will investigate ways to deal with process energy requirements and emissions to design a sustainable process for the production of ethanol.
- **theohtbhISE**

Students that have questions regarding additional classes for their spring schedule should talk to their academic advisor. A list of academic advisors can be found at: <http://www.admin.mtu.edu/urel/studenthandbook/advisors.html>