The Engineering Process • ENG5100

June 18 – 22 & 25 - 29, 2012

The course intended to introduce engineering to pre-college teachers by providing them with a meaningful experience about the process and methods that engineers use to solve problems. The engineering process (as opposed to the scientific process) will be outlined, as will some of the "non-technical" aspects of engineering. Students will be required to complete a design project that meets design criteria culminating in testing of the project and analysis of the results.

Course Topics:
The Engineering Process
Engineering Design
Concept Generation
Benchmarking
Spatial Relationships
Engineering Drawings
Prototyping
Reverse Engineering
Design for X
Ethics in Engineering
Project Management Tools
Oral/Written Reports
Statics: Forces, moments, FBDs, reactions, trusses
Design Project Testing - Bridge Design
Technical Report - Bridge Design

Location: Troy, MI at Meritor Corporation Headquarters

Cost: Resident/Non-Resident - $1,000 registration fee. This cost covers *MTU tuition, textbooks, and technical equipment.

Credit: 4 graduate credits through Michigan Technological University’s Department of Engineering Fundamentals
Return application by May 1, 2012

Applicants will be notified of selection by May 15, 2012.
Upon notification of selection, participants will be provided with information regarding payment and course information.
The Engineering Process
Participant Application

Please type or print in ink. Duplicate as needed.

Name______________________________________________________________________________________________
First Middle Last
Home address _______________________________________________________________________________________
Street City State ZIP
Date of birth_____________________________________ SS# or MTU M #
Home phone ( ) Work phone ( )
Fax ( ) Work email ________________________________________
How often do you check your email? ___________ Home email_________________________________________________
School name____________________________________________
School address_______________________________________________________________________________________
Street City State ZIP
Current subject areas taught____________________________________________
Grades taught _______________________________________________________________________________________
School District______________________________________________________________
Degree earned/areas of certification ______________________________________________________________________

I agree to all of the following to participate in the The Engineering Process ENG5100:
1) Read and respond to all preparatory materials and communications prior to the course.
2) Consent to the release of my name, address, and email address to other participants in the course.
3) Fully participate in each day of the course.
4) Meet the requirements of the syllabus for the course.
5) Understand that my final project may be published in some form.
6) Consent to the release of my photograph for publications.

Signature _________________________________________________________________ Date _____________________

Return your completed application by May 1, 2012 to:

Lori Witting
Teacher Professional Development Coordinator
Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931-1295
Phone 906-487-2263
Fax 906-487-2468

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www.ed.mtu.edu

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