MECHANICAL ENGINEERING PROGRAM

ABET COURSE SYLLABUS

ME 220: ME 220 - 3D Modeling with Pro Engineer (1 credit): Required Course

Course Description (2008-2010 Catalog): Parametric, feature-based solid modeling with ProEngineer software package. Credits 1

Prerequisite Course: None

Textbook: "Pro/ENGINEER Wildfire Tutorial and Multimedia CD by Dr. Roger Toogood

Other Reference Material: N/A

Course Coordinator: Z.Y. Wang, Associate Professor

Course learning outcomes: The main objective of the course is learning the 3-Dimensional modeling of mechanical systems using Pro/Engineer software. The course includes generating solid models, assemblies and drawings of different systems using Pro/E Wildfire 3.0

Relationship of Course to Mechanical Engineering Program Educational Outcomes:

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<th>Goal 1: Provide mechanical engineering graduates with technical capabilities.</th>
<th>Goal 2: Prepare the mechanical engineering graduates to have effective workplace skills.</th>
<th>Goal 3: Instilling a sense of responsibility as a professional member of society.</th>
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Topics Covered:

1) Introduction to Pro/Engineer Wildfire-3 User Interface, View Controls & Model Structure;
2) Pro/E Sketcher and few practice examples
3) Solid Modeling Part-1, (Extrude, Revolve, Sweep, Blend & Chamfer features);
4) Solid Modeling Part-2, (Hole, shell, Rib, Draft, Mirror, Pattern features);
5) Creating Datum Planes, Datum Axis & Datum Point), Modifying features, Model analysis, Modeling Utilities;
6) Creating Assembly in Pro/E, Assembly Constraints;
7) Assembly Operations, Assembly Drawings;

Laboratory Projects: In-class assignments and homework are assigned weekly, and projects are given in the 10th week.
Class/Laboratory Schedule:  W 7:00-10:00 PM (Fall Semester)

Assessment of Student Progress toward Course Objectives
In-class assignments are conducted every class and are consist of the material being covered that day. Attendance is mandatory to obtain a grade for in-class assignments.

Contribution of Course for meeting Professional Component:
(a) Mathematics and basic sciences:  0 credit
(b) Engineering Topics (Design/Science):  1 credit
(c) General Education:  0 credit
(d) Others:  0 credit

Prepared By:       Date:
Z.Y. Wang         October 2, 2009