Appendix I  Civil Engineering: ABET Self-Study Report - 2007

(1) Department: Civil Engineering  
   Number: BE 1205  
   Title: Graphic Fundamentals of Engineering Design

(2) Required or Elective Course  
   Required

(3) Catalog Description:  
   Fundamentals of multi-view projections, auxiliaries, sections, pictorial drawings,  
   dimensioning, introduction to CAD (AUTO CAD and UNIGRAPHICS), and land  
   surveying drawing.

(4) Prerequisites:  
   None

(5) Textbook:  
   In House Class Notes by Professor H.S. Oey.  
   The following drawing tools are required: compass, rulers, two triangles (45/45  
   and 30/60), protractor, French curve, eraser, engineering Paper, multicolored pens  
   and pencils, modeling clay/play dough, mass storage device (USB) for storing  
   computer work.

(6) Course Objectives: The purpose of this course is to learn the language of an  
   engineer. The students shall be able to understand and apply: fundamentals of  
   multi-view projections, computer-aided drafting (CAD), true shape and true angle  
   concepts (auxiliary views), fundamentals of 3D drawing and modeling (Pictorial), descriptive geometry and dimensioning, sectional view projections,  
   sketching.  
   Student will be able to Use Information Technology and Modern Engineering  
   Tools (K);  
   Students shall be able to Present Data, Concepts, and Designs Graphically (G);  
   Students shall be able to work successfully as a Team (D);  
   Students will demonstrate knowledge of Professional Code of Ethics via Exams  
   and Group Exercise (M);  
   Ability to Design a System, Component to Meet Desired Engineering Needs (C);  
   Ability to Identify, Formulate, and Solve Engineering Problems (E);  
   Ability to Apply Mathematics, Science, and Engineering Principles to Solve  
   Engineering Problems (A).

(7) Topics covered:  
   Fundamentals of 2D Construction, Sketching, Orthographic Views, Sectional  
   Views, Auxiliary Views, Dimensioning, Fundamentals of 3D Drawing, Surface  
   Modeling, Solid Modeling, Descriptive Geometry.

(8) Class/Laboratory Schedule:  
   TR: 12:00 to 1:50 PM
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MW: 9:30 to 11:20 PM

(9) Contribution of course to meeting the professional component:
The course contributes towards one year of a combination of college level
mathematics and basic sciences component.

(10) Prepared by:
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