

School of Engineering and Computer Science
Mech 103: Engineering Graphics

Catalog Data:	Mech 103 Engineering Graphics; 3 (1-6) credits Orthographic theory, conventions, and visualization; isometric and oblique pictorials; geometric dimensioning and tolerancing, computer-aided drafting and solid modeling.
Class Schedule:	One 50-minute lecture per week, for one semester.
Laboratory Schedule:	One 3-hour CAD Lab session per week, for one semester. One 3-hour Drafting Lab session per week, for one semester.
Prerequisites by Course:	None.
Prerequisites by Topic:	None.
Required Texts:	None.
Course Coordinator:	Dr. Hakan Gurocak
Course Objectives:	Fundamental principles and applications of engineering graphics and descriptive geometry, including <ul style="list-style-type: none"> • Industry practices in the creation of parts, assemblies, and drawings • Controlled drafting/modeling standards to help explain the designer's intent • Difference between bottom-up and top-down design, and their implications with respect to assemblies and parts • Representation of design information using concise language, methods and rules of engineering graphics • Communication of design ideas in written, and graphical exercises.
Topics Covered:	<ul style="list-style-type: none"> • Visualization • Freehand sketching • Solid modeling & drafting in SolidWorks • Part generation by sketched and modifying feature geometry. • Dimensioning and constraints used w/in the part/assembly feature generation, as well as applying equations that can help control surface topology • Mechanical engineering applications • Creation of parts/assemblies from hand sketched geometry
Lab Experiments and Activities:	Solid modeling

Course Outcomes:	Students will be able to:		
	Assessed for Program Outcomes	C-2. Generate conceptual designs and solid models. G-1. Prepare engineering drawings, using appropriate format. K-3. Use software for solid modeling.	
		Other	I-1. Use outside resources for conceptual design.
Required or Elective Course:	Required		
Contribution to Professional Component:	Engineering Topics		
Relationship of Course to Program:	Meets: Educational Objectives <u>1, 2, 4</u> Program Outcomes <u>C, G, I, K</u>		
Prepared by:	Dr. Hakan Gurocak	Date:	October 10, 2008
Approved by CAC:			