

School of Engineering and Computer Science
MECH 103: Engineering Graphics

Catalog Data:		103 Engineering Graphics 2 (1-3) Orthographic theory, conventions, and visualization; isometric and oblique pictorials; geometric dimensioning and tolerancing, computer-aided drafting and solid modeling. Typically offered Fall.
Class Schedule:		One 50-minute lecture per week, for one semester.
Laboratory Schedule:		One 3-hour CAD Lab session per week, for one semester.
Prerequisites by Course:		None
Prerequisites by Topic:		None
Textbook:		None
Course Coordinator:		Dr. Dave Kim
Course Objectives:		Students will be able to: 1. Develop a further understanding for design intent (materials, manufacturing, and assembly considerations). 2. Create and modify 2D sketches using lines, arcs, and geometric relations. 3. Create and modify 3D features based on 2D sketches (extrude, revolve, sweep, and loft). 4. Create assemblies from existing and custom designed parts. 5. Generate 2D technical drawings that properly display manufacturing specifications. 6. Use advanced design tools properly (Design Tables, Sheet Metal, Weldments, Mold Tools, Surfacing). 7. Conduct imported part repair.
Topics Covered:		1. Visualization 2. 2D sketches 3. 3D feature generation by sketched and modifying 2D/3D feature geometry 4. Dimensioning and constraints used w/in the part/assembly feature generation, as well as surface topology 5. Mechanical engineering applications 6. Creation of parts/assemblies from hand sketched geometry
Lab Experiments and Activities:		Solid modeling
Course Outcomes:		Students will be able to:
	Assessed for Student Outcomes	2-b. Generate conceptual designs, solid models, and assemblies. 3-a. Prepare engineering drawings with appropriate format.
	Other	

<i>Required or Elective Course:</i>	Required		
<i>Relationship of Course to Program:</i>	Meets: Educational Objectives <u>1, 2, 4</u> Student Outcomes <u>2, 3</u>		
<i>Prepared by:</i>	Dr. Dave Kim	Date:	3/22/2018 (4.6.18 mb)
<i>Approved by USC:</i>	4/2/18		