

School of Engineering and Computer Science
Mech 101: Introduction to Mechanical Engineering

Catalog Data:	Mech 101 Intro to Mechanical Engineering; 2 credits Introduction to mechanical engineering profession; engineering problem solving; computers in engineering; design methods.
Class Schedule:	Two 50-minute lectures per week, for one semester.
Laboratory Schedule:	None
Prerequisites by Course:	None
Prerequisites by Topic:	Knowledge of fundamental physics and mathematics.
Required Text:	J. Wickert, <i>Introduction to Mechanical Engineering</i> , ISBN 0-534-55297-8.
Course Coordinator:	Dr. Amir Jokar
Course Objectives:	In this course, the students: <ul style="list-style-type: none"> ▪ define mechanical engineering problems and propose solutions, ▪ participate in a team-work class project to design and build a prototype with constraints, ▪ write a technical report on the class-project and give a professional presentation at the end of class, ▪ learn about engineering ethics, continuing education, contemporary issues, global context, etc., ▪ learn about the importance of using computers and software in solving engineering problems.
Topics Covered:	<ul style="list-style-type: none"> ▪ Introduction to mechanical engineering disciplines ▪ Mechanical engineering computer-based modeling ▪ Engineering problem solving ▪ Engineering ethics ▪ Design project competition ▪ Industrial tours
Lab Experiments and Activities:	None

Course Outcomes:	Students will be able to:		
	Assessed for Program Outcomes	C-4. Demonstrate teamwork to build a mechanical system based on the required specifications and constraints. H-1. Evaluate the impact of engineering solutions in a global context; in their design projects or in some specific mechanical engineering problems. I-2. List the continuing education opportunities in mechanical engineering. I-3. Speculate on accepting personal responsibility for life-long learning. J-1. Evaluate the impact of contemporary issues, such as environmental, economic, emerging technologies, etc.	
		Other	A-2. Apply the fundamentals of physics and mechanics in solving mechanical engineering problems. F-1. Recognize the ethical issues while practicing and solving the engineering problems. G-2. Deliver a well-organized oral presentation, including good explanations when questioned, for the design projects at the end of semester. K4. Use a mechanical engineering software for analyzing their design projects; conduction, convection and radiation heat transfer.
Required or Elective Course:	Required		
Contribution to Professional Component:	Engineering Topics		
Relationship of Course to Program:	Meets: Educational Objectives <u>1, 2, 3, 4</u> Program Outcomes <u>A, C, F, G, H, I, J, K</u>		
Prepared by:	Dr. Amir Jokar	Date:	October 10, 2008
Approved by CAC:			