

PRE-MECHANICAL ENGINEERING

Mechanical engineers are considered the “general practitioners” of engineering because their education is extremely broad and their services span many interdisciplinary technical, social environmental and economic problems. These engineers deal with a wide realm of motion, all forms of energy conversion and transmission; the flow of fluids and heat; the development, design and operation of machinery and equipment; material structure and properties; and transportation processes. Here, you’ll choose among three major areas: thermal-fluid science engineering, systems and design engineering, and materials science engineering. Your career could include research and development, design of equipment and systems, testing, plant and sales engineering, and management.

Requirements

Course	Title	Credits
First Year		
First Semester		
MATH 1950	CALCULUS I	5
CHEM 1180	GENERAL CHEMISTRY I	3
CHEM 1184	GENERAL CHEMISTRY I LABORATORY	1
Communication Elective:		3
ACE Elective ¹		3
ENGR 100 or CMST 2010 or CMST 2410	INTERPERSONAL SKILLS FOR ENGINEERING LEADERS or INTERPERSONAL COMMUNICATION or SMALL GROUP COMMUNICATION AND LEADERSHIP	3
ENGR 10	FRESHMAN ENGINEERING SEMINAR	0
Credits		18
Second Semester		
MATH 1960	CALCULUS II	4
CHEM 1190	GENERAL CHEMISTRY II	3
CHEM 1194	GENERAL CHEMISTRY II LABORATORY	1
PHYS 2110	GENERAL PHYSICS I - CALCULUS LEVEL	4
PHYS 1154	GENERAL PHYSICS LABORATORY I	1
CIST 1400 or CSCI 2240 or CIST 1600	INTRODUCTION TO COMPUTER SCIENCE I or INTRODUCTION TO C PROGRAMMING or INTRODUCTION TO PROGRAMMING USING PRACTICAL SCRIPTING	3
Credits		16
Second Year		
First Semester		
MATH 1970	CALCULUS III	4
PHYS 2120	GENERAL PHYSICS-CALCULUS LEVEL	4
MECH 223	ENGINEERING STATICS	3
CONE 206	ENGINEERING ECONOMICS	3
ECEN 211	ELEMENTS OF ELECTRICAL ENGINEERING	3
ENGR 20	SOPHOMORE ENGINEERING SEMINAR	0
Credits		17
Second Semester		
MATH 2350	DIFFERENTIAL EQUATIONS	3
MECH 200	ENGINEERING THERMODYNAMICS	3

MECH 325	MECHANICS OF ELASTIC BODIES	3
MECH 373	ENGINEERING DYNAMICS	3
MATH 2050	APPLIED LINEAR ALGEBRA	3
Credits		15
Total Credits		66

¹ ACE Elective: Choose from list. Flexible ACE electives include categories 5, 6, 7, and 9. Students must complete one from each category; for a total of four courses.

Other applicable courses available:

Code	Title	Credits
ACE elective ¹		9
CIVE 310	FLUID MECHANICS	3