

B.S. In Mechanical Engineering

Specializations: Mechanics, Computational Mechanics, Stochastic Mechanics, Fluid Dynamics, Heat Transfer, Dynamics and Control, Robotics, Biomedical Systems and Aerospace Sciences. Requirements include at least 3 upper-level courses (cluster courses) of which at least 2 must come from Group A (MECH 400, 403, 411, 417, 473, 454, 498, 594 and MSCI 402) and the third can come from Group A or Group B. See department for Group B list.

Sample Degree Plan

THIS IS ONE EXAMPLE OF MANY POSSIBLE SCHEDULES.

CONSULT A DIVISIONAL OR DEPARTMENTAL ADVISOR TO CUSTOMIZE YOUR DEGREE PLAN.

FALL			SPRING		
FRESHMAN 16 credits			FRESHMAN 17 credits		
MATH 101	Single Variable Calculus I	3	MATH 102	Single Variable Calculus II	3
PHYS 101	Mechanics w/Lab	3*	PHYS 102	Electricity & Magnetism II w/Lab	4*
CHEM 121	General Chemistry I w/Lab	4*	CHEM 122	General Chemistry II w/Lab	4*
DIST	Distribution elective	3	CAAM 210	Intro to Engineering Computation	3
OPEN	Open elective	3	DIST	Distribution elective	3
LPAP	Lifetime Phys Activity elective	0	LPAP	Lifetime Physical Activity elective	0
SOPHOMORE 16 credits			SOPHOMORE 16 credits		
MATH 211	Ordinary Differential Equations	3	MATH 212	Multivariable Calculus	3
MECH 211	Engineering Mechanics	3	MECH 200	Classical Thermodynamics	3
MSCI 301	Materials Science	3	MECH 311	Mechanics of Solids	3
MECH 340	Industrial Processing Lab	1	MECH 331	Junior Laboratory I - Mechanics	1
OPEN	Open elective	3	DIST	Distribution elective	3
DIST	Distribution elective	3	OPEN	Open elective	3
JUNIOR 16–17 credits			JUNIOR 16–17 credits		
CAAM 335	Matrix Analysis	3–4	CAAM 336	Diff Eqs in Science & Eng	3–4
MECH 343	Modeling of Dynamic Systems	4	MECH 332	Junior Laboratory II - Fluids/Solids	1
MECH 371	Fluid Mechanics I	3	MECH 401	Machine Design	3
SPEC	MECH Cluster #1	3	MECH 420	Fund of Control Systems	3
DIST	Distribution elective	3	MECH 481	Heat Transfer	3
			SPEC	MECH Cluster #2	3
SENIOR 17 credits			SENIOR 18 credits		
MECH 407	Mechanical Design Project I	4	MECH 408	Mechanical Design Project II	3
MECH 431	Senior Laboratory	1	MECH 412	Vibrations	3
MECH 472	Thermal Systems Design	3	SPEC	MECH Cluster #3	3
STAT	STAT 305 or 310 or 331	3	DIST	Distribution elective	3
DIST	Distribution elective	3	OPEN	Open elective	3
DIST	Distribution elective	3	OPEN	Open elective	3

* In addition to class hours, these courses have a regularly scheduled lab that must fit into your schedule.

BASIC REQUIREMENTS	General Math & Science Courses	42
	Core Courses in Major	42
ELECTIVE REQUIREMENTS	Engineering Specialization Electives	9
	Open Electives	15
	Distribution Courses in Humanities and Social Science	24
	Minimum credit required for the B.S.	132

Of the 132 total degree credits, MECH requires at least 84 credits in general math and science courses and core courses.

Major Requirements

NUMBER	CREDIT	TITLE
CAAM 210	3	Introduction to Engineering Computation
CAAM 335	3-4	Matrix Analysis
CAAM 336	3-4	Differential Equations in Science and Engineering
CHEM 121	4*	General Chemistry I w/Lab
CHEM 122	4*	General Chemistry II w/Lab
MATH 101	3	Single Variable Calculus I
MATH 102	3	Single Variable Calculus II
MATH 211	3	Ordinary Differential Equations and Linear Algebra
MATH 212	3	Multivariable Calculus
MSCI 301	3	Materials Science
PHYS 101	3*	Mechanics w/Lab
PHYS 102	4*	Electricity and Magnetism w/Lab
STAT 305/310/331	3	Limited Elective
MECH 200	3	Classical Thermodynamics
MECH 211	3	Engineering Mechanics
MECH 311	3	Mechanics of Solids & Structures
MECH 331	1	Junior Laboratory I (Mechanics Lab)
MECH 332	1	Junior Laboratory II (Thermo/Fluids Lab)
MECH 340	1	Industrial Processing Lab
MECH 343	4	Modeling of Dynamic Systems
MECH 371	3	Fluid Mechanics I
MECH 401	3	Mechanical Design Applications
MECH 407	4	Mechanical Design Project I
MECH 408	3	Mechanical Design Project II
MECH 412	3	Vibrations
MECH 420	3	Fundamentals of Control Systems
MECH 431	1	Senior Laboratory
MECH 472	3	Thermal Systems Design
MECH 481	3	Heat Transfer
SPECIALIZATION CLUSTER	3	Mech Area Cluster Course #1
SPECIALIZATION CLUSTER	3	Mech Area Cluster Course #2
SPECIALIZATION CLUSTER	3	Mech Area Cluster Course #3

* In addition to class hours, these courses have a regularly scheduled lab that must fit into your schedule.