

MECH

Mechanical Engineering

WEB LINKS	mech.rice.edu/undergrad
FRANK ADVICE	Students interested in pursuing a degree in Mechanical Engineering are encouraged to declare their major early. See an adviser to create your degree plan.
ADVICE FOR STUDENTS WITH AP CREDIT	Students with AP credit for calculus are encouraged to take the MATH and CAAM sequences earlier than suggested in the sample degree plan.
ALTERNATIVE CURRICULA	Double majoring is not encouraged due to the large number of required classes in the B.S.M.E. degree. Students intending to double major should consult an adviser to develop an appropriate program of study.
BS VERSUS BA	Only the B.S. degree is accredited by the Engineering Accreditation Commission (EAC) of ABET, www.abet.org , and is the most direct route toward becoming a licensed professional engineer (PE). The B.A. is recommended for students who will pursue professional careers in medicine, law, or business immediately after their undergraduate education.
NOT REQUIRED BUT HIGHLY RECOMMENDED COURSES	MECH 403, Computer Aided Design



MECHANICAL

RESEARCH	Students are encouraged to speak with their professors directly regarding undergraduate research opportunities. To learn more about faculty research go to https://mech.rice.edu/research .
INTERNSHIPS	Most students participate in summer internships in industry, especially after sophomore and junior years. Students should register with the Center for Career Development (ccd.rice.edu/) and explore further opportunities on the CCD's RICElink, where potential employers post open positions and internships.
STUDY ABROAD	Study abroad is most feasible in the fall semesters of the sophomore and junior years. This avoids conflicts with lab classes (MECH 331, 332) and avoids conflicts with the year-long senior design sequence (MECH 407/408).
PROFESSIONAL ORGANIZATIONS	The American Society of Mechanical Engineers (asme.rice.edu/) hosts industry representatives and organizes outreach, service and design projects. The American Institute of Aeronautics and Astronautics (www.ruf.rice.edu/~aiaa/) organizes activities for students interested in aerospace engineering. Many mechanical engineering students are also active in the Rice Engineers Without Borders chapter (ewb.rice.edu/). Leadership positions are often available to freshmen and sophomores in all of these organizations.
INTERESTING COURSES FOR NON-MAJORS	MECH 454 Computational Fluid Mechanics MECH 498 Introduction to Robotics MECH 594 Introduction to Aeronautics

B.A. In Mechanical Engineering

Specializations: Not Applicable

Sample Degree Plan

THIS IS ONE EXAMPLE OF MANY POSSIBLE SCHEDULES.

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

FALL		17 credits		SPRING		17 credits	
FRESHMAN				FRESHMAN			
MATH 101	Single Variable Calculus I	3		MATH 102	Single Variable Calculus II	3	
CHEM 121	General Chemistry I w/Lab	4*		CHEM 122	General Chemistry II w/Lab	4*	
PHYS 101	Mechanics w/Lab	4*		PHYS 102	Electricity & Magnetism w/Lab	4*	
FWIS	Freshman Writing	3		CAAM 210	Intro to Eng Computation	3	
OPEN	Open elective	3		DIST	Distribution elective	3	
SOPHOMORE		15 credits		SOPHOMORE		15 credits	
MATH 211	Ordinary Differential Equations	3		MATH 212	Multivariable Calculus	3	
MECH 211	Engineering Mechanics	3		MECH 200	Classical Thermodynamics	3	
MSNE 301	Materials Science	3		MECH 311	Mechanics of Solids	3	
DIST	Distribution elective	3		DIST	Distribution elective	3	
OPEN	Open elective	3		OPEN	Open elective	3	
JUNIOR		17 credits		JUNIOR		15 credits	
CAAM 335	Matrix Analysis	3		CAAM 336	Diff Eqs in Science & Eng	3	
MECH 343	Modeling of Dynamic Systems	4*		MECH 401	Machine Design Applications	3	
MECH 371	Fluid Mechanics I	3		MECH 420	Fundamentals of Control Systems	3	
DIST	Distribution elective	3		MECH 481	Heat Transfer	3	
OPEN	Open elective	3		DIST	Distribution elective	3	
LPAP	Lifetime Phys Activity elective	1					
SENIOR		18 credits		SENIOR		15 credits	
DIST	Distribution elective	3		MECH 412	Vibrations	3	
OPEN	Open elective	3		OPEN	Open elective	3	
OPEN	Open elective	3		OPEN	Open elective	3	
OPEN	Open elective	3		OPEN	Open elective	3	
OPEN	Open elective	3		OPEN	Open elective	3	
OPEN	Open elective	3					

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

- When registering for PHYS 101, you must also register for PHYS 103, the discussion section for 101.
- When registering for PHYS 102, you must also register for PHYS 104, the discussion section for 102.

BASIC REQUIREMENTS	General math & science courses	31
	Core courses in major	37
ELECTIVE REQUIREMENTS	Open electives and LPAP FWIS and distribution courses	39 21
	Minimum credit required for the B.A.	128

Of the 128 total degree credits, the B.A. in Mechanical Engineering requires 68 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 & 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 & Linear Algebra
MATH 212	3	Multivariable Calculus
MSNE 301	3	Materials Science
PHYS 101•	3*	Mechanics w/Lab
PHYS 102••	4*	Electricity and Magnetism w/Lab
MECH 200	3	Classical Thermodynamics
MECH 211	3	Engineering Mechanics
MECH 311	3	Mechanics of Solids & Structures
MECH 343	4*	Modeling of Dynamic Systems
MECH 371	3	Fluid Mechanics I
MECH 401	3	Mechanical Design Applications
MECH 412	3	Vibrations
MECH 420	3	Fundamentals of Control Systems
MECH 481	3	Heat Transfer

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