



MECHANICAL ENGINEERING

Mechanical engineering applies principles of engineering, mathematics, physics, and materials science for the analysis, design, manufacture, operation, and maintenance of equipment and machinery. It also encompasses all forms of energy production, exchange, and conversion for a wide variety of applications.

What Do Mechanical Engineers Do?

Mechanical engineers are versatile and work in industries such as automotive, air and space, and petrochemical, to name a few. Careers include heating, ventilation, and air conditioning (HVAC) engineer; automotive designer; manufacturing engineer; reliability and maintenance engineer; production supervisor; and more. As an LSU Mechanical Engineer, you will learn to emphasize physical realization of prototypes, develop skills for communicating technical content effectively, and engage your professional community through industry-sponsored projects.

Communication Across the Curriculum

Our mechanical engineers are not only technical experts; they are also trained to be good communicators. The degree is designed so that students take a number of “communication-intensive” courses to help students improve their written, spoken, visual, and technological communication skills.

Capstone Design Class

The Bachelor of Science in Mechanical Engineering program culminates in a yearlong capstone design course sequence that requires student teams to conceive, design, manufacture, and test an engineered system, piece of equipment, or apparatus. Projects are proposed and sponsored by individuals, organizations, and most often, by industry. Partnered with the LSU Division of Electrical & Computer Engineering, this interdisciplinary course provides a holistic experience and hones other attributes such as leadership, project management, teamwork, responsibility, accountability, communication skills, and entrepreneurship. Capstone projects consist of national/international design competitions, disability-assistance devices, and consumer and industrial products. Recent examples include remote-controlled aircraft and a formula-style racing vehicle, a prosthetic device for a high school athlete with a congenital hand defect, and a novel hybrid (additive and subtractive) manufacturing system.

PROGRAM FACTS

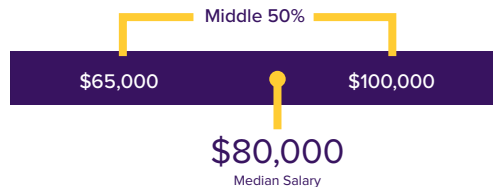
2023–2024 Enrollment: 1,016 Students

Minors: Aerospace, International Automotive Engineering, Materials Science and Engineering, Nuclear Power Engineering, Robotics

Student Organizations:
American Society of Mechanical Engineers (ASME), The Society of Automotive Engineers (SAE), The American Institute of Aeronautics and Astronautics (AIAA)

GRADUATE STARTING SALARIES

Median full-time in field salary info for graduates of the last three years



Undergraduate Program Director:

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DESIGN COMPETITION TEAMS:

FSAE—Design 1/3 scale Formula I (Indy) race car

SAE Aero—Design remote-controlled airplane

SAE Mini-Baja—Design prototype off-road vehicle

Shell Eco Marathon—Design eco-friendly/efficient vehicle

Bengal Reauxbotics—Design competition robots

Mechanical Engineering CURRICULUM OVERVIEW

YEAR 1	YEAR 2	YEAR 3	YEAR 4
Introduction to Mechanical ENGR Design Fundamentals	Thermodynamics	Manufacturing Processes and Methods	Senior Design I
Introduction to Mechanical ENGR Design Innovation	Materials of ENGR for Mechanical Engineers	System Dynamics and Modeling	Senior Design II
Physics I: Particle Mechanics	Materials of ENGR Laboratory	Fluid Mechanics	Theory and Design of Mechanical Control Systems
General Chemistry I	Dynamics	Machine Design I: Kinematics of Machinery	Mechanical ENGR Design Lab
General Chemistry II	Simulation Methods for Mechanical Engineers	Machine Design II: Strength Considerations and Component Design	Thermal Science Lab
General Chemistry or Intro Physics Lab	Statics	Material Selection for Mechanical Engineers	Tech Elective
Calculus I	Mechanics of Materials	Instrumentation and Measurement	Tech Elective
Calculus II	Comprehensive Electrical ENGR	Heat Transfer	General Ed: Social Sciences
General Ed: English Comp I	Physics III: Fields: Gravity, Electricity, and Magnetism	Thermal System Lab	General Ed: Humanities
General Ed: Arts	Calculus III	Electronics	General Ed: Humanities
General Ed: Life Science	Mathematical Methods in ENGR	Economic Principles	General Ed: Humanities
		General Ed: English Comp II	

LEGEND

Major-specific Engineering
Other Engineering
Science
Math
General Education