FAQ

About admissions to the College of Engineering

For High School Students
Minimum GPA 2.8, successful completion of Trigonometry, Physics and Chemistry classes

For Transfer Students
Minimum GPA 3.0, successful completion of ENG100, Math 241 & 242, Physics 170/170L, CHEM 161/161L & CHEM162 (or equivalents)

Students who don’t meet the requirements can enroll in pre-engineering in Arts and Sciences and transfer to an engineering major at a later time.

Program Courses for Electrical Engineering:
32 credits of Mathematics and Basic Sciences,
32 credits of Engineering Sciences, and
16 credits of Engineering Design

Possible Careers in Electrical Engineering:
- Antennas and Microwave
- Biomedical Applications
- Circuit Design
- Communications and Networks
- Computer Hardware and Software
- Micro- and Mechanical Systems (MEMS)
- Nanotechnology
- Power and Energy
- Signal and Image Processing

Contact Us
University of Hawai‘i at Manoa
College of Engineering
2540 Dole Street, Holmes 240
Honolulu, Hawai‘i 96822

Ph: (808) 956-7727
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www.eng.hawaii.edu
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Electrical Engineering
Are you interested in smart grids, nanotechnology, mobile systems, or biomedical devices?

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Then head for Electrical Engineering to channel power from power sources to homes, factories, and businesses as well as design components to move digital information using cutting-edge technologies.

The College of Engineering is well known for its student-led research projects. In collaboration with the faculty, undergraduate students can explore their engineering interests.

Some hands-on projects that Electrical Engineering students can work on:

Small Satellites:
Multidisciplinary teams of students design and fabricate nanosatellites that are actually launched into low-earth orbit.

“Electrical Engineers design everything from advanced communication systems, to renewable energy production, to novel personal computing devices, to state-of-the-art medical systems.”

- Dr. Wayne Shiroma, Chair, Dept. of Electrical Engineering

Micromouse:
Students design, program, and build a small and completely autonomous robotic mouse to compete against each other within a 16 x 16-cell maze in a race for the quickest time.
Civil & Environmental Engineering

Would you like to play a part in creating a sustainable future, or enhance the development of Hawaii’s infrastructure?

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*Students who don’t meet the requirements can enroll in pre-engineering in Arts and Sciences and transfer to an engineering major at a later time.

Program Courses for Civil & Environmental Engineering include:
32 credits of college level mathematics and basic sciences and 48 credits of engineering topics in addition to general education and other requirements

Possible Careers with Civil and Environmental Engineering
- Construction Management
- Geotechnical
- Environmental
- Structural
- Water Resources
- Transportation
- Coastal

Civil & Environmental Engineering

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Then head for Civil & Environmental Engineering to plan, design and operate environmentally and socially friendly infrastructure projects.

"Civil Engineering as a profession offers a wide range of career opportunities in areas that support the health, safety and well-being of the population. As a Civil Engineer, your career options may center on safe drinking water systems, roadways, bridges and other structures, energy systems, natural disaster mitigation, and many, many more. Civil Engineering specialties are at the heart of structures and their environment everywhere."

- Dr. C.S. Papacostas, Chair, Dept. of Civil & Environmental Engineering

The College of Engineering is well-known for its student-led research projects. In collaboration with the professors, undergraduate students can explore their engineering interests.

Some hands on projects that Civil & Environmental Engineering students can work on:

Concrete Canoe:
A national competition where a team of students design and build a canoe made of concrete and challenges their knowledge, creativity and stamina, while showcasing the versatility and durability of concrete as a building material.

Steel Bridge:
A nationally recognized competition where a team of students design, fabricate, and test a steel structure which meets certain specifications and optimizes performance and economy.
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*Students who don’t meet the requirements can enroll in pre-engineering in Arts and Sciences and transfer to an engineering major at a later time.*

**Program Courses for Mechanical Engineering:**
32 credits of Mathematics and Basic Sciences
32 credits of Engineering Sciences
16 credits of Engineering Design

**Possible Careers with Mechanical Engineering:**
- Aerospace
- Biomedical
- Consulting
- Design
- Energy Production
- HVAC
- Industrial
- Manufacturing
- Marine
- Materials

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**Mechanical Engineering**

Have you always been interested in the way things are put together and the ways in which moving parts interact?

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Then head for **Mechanical Engineering**, to design, build and maintain machines of all types and sizes.

The College of Engineering is well-known for its student-led research projects. In collaboration with the professors, undergraduate students can explore their engineering interests.

**Unmanned Aerial Vehicles:** These competitions intend to provide students with real-life engineering challenges. They involve designing and fabricating remote controlled airplanes.

**Mini Baja Projects:**
A nationally recognized competition with the objective to simulate real-world engineering designs. Each team has to construct an all terrain vehicle accepted to a fictitious firm. Other vehicle projects include super mileage (a super efficient all-composite car), formula (a racing car), and electric vehicles.

**Field Robotics Laboratory:**
Research on autonomous control and filter navigation of multi-sensor mobile robotics platforms.

“**In Mechanical Engineering, we make the machines that build our civilization and make travel on earth, sea, aerospace and outer space possible…** We design and improve everything from artificial hearts and other biomedical devices, to wind turbines, to robots, to advanced materials, to climate control systems even the engine and other components in your next car.”

- Dr. Mehrdad Ghasemi-Nejad, Dept. Chair of Mechanical Engineering

**Here are some previous projects that Mechanical Engineering students have worked on:**

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Program Courses for Computer Engineering:
32 credits of college-level mathematics and basic sciences
48 credits of engineering topics

Possible Careers in Computer Engineering:
- Computer Systems
- Computer Hardware/Software
- Computer Networks
- Embedded Systems
- Micro Controllers
- Digital Circuits
- Circuit Design

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Then head for **Computer Engineering** to work with all aspects of computing, including operating systems, networks, software and hardware.

“Computer Engineering is about creating and applying computer software and hardware to solve problems. We are surrounded by computers and technology which makes computer engineering an influential field. Computer Engineering is rapidly changing and growing along with technology at a tremendous rate creating many opportunities worldwide.”

- Dr. Galen Sasaki, Associate Professor of Computer Engineering

The College of Engineering is well known for its student-led research projects. In collaboration with the faculty, undergraduate students can explore their engineering interests.

**Some hands-on projects that Computer Engineering students can work on:**

**Small Satellites:**
Multidisciplinary teams of students design and fabricate nanosatellites that are actually launched into low-earth orbit. Computer engineering students work on both the hardware and software.

**Extreme Programming Competition:**
In this worldwide programming competition, students compete in a 24-hour time span to solve a set of programming problems.

**Micromouse:**
Students design, program, and build a small and completely autonomous robotic mouse to compete against each other within a 16x16-cell maze in a race for the quickest time.

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