**Facts**

- 2,408: Average number of enrolled undergraduate students

**Benefits**

- World class laboratories and facilities
- Senior design projects tied to research and industry partnerships
- Access to 3D printing labs
- 40+ engineering student organizations
- Internship and Co-op opportunities
- Annual Engineering Career Fair with industry employers
- Engineering Residential Learning Community with on-site tutoring

**Admissions Requirements**

- GPA: 3.0
- Standardized testing not required
- 4 years of college prep math equivalent to algebra, geometry, algebra 2 AND an additional year at or above the level of algebra 2
- 1 year of chemistry or physics completed or in progress

**Undergraduate Scholarships and Aid**

- $2,162,000: Total amount of the 323 individual scholarships awarded in 2021-2022.
- 134: Engineering scholarship funds
- Additional grants, scholarships, loans, and work study opportunities offered through the CSU Office of Financial Aid.

**Average Cost of Tuition Per Semester**

- $7,764.71: In-state
- $17,743.41: Out-of-state

**Find your future**

- 92% of graduates go on to a job in their field
- Among the top employers: Lockheed Martin, Medtronic, U.S. Air Force, Kimley-Horn, Kiewit
Biomedical Engineering (BME)

Through our multidisciplinary approach, students learn to create products and solutions to tackle problems in human and animal health.

Program Overview

Biomedical Engineering is a five-year dual-degree program that combines the breadth of biomedical engineering with the depth of a traditional engineering degree. With a curriculum focused on engineering, biology, and medicine, graduates of the biomedical engineering (BME) program receive two degrees: one B.S. in biomedical engineering (BME) and the other B.S. in one of the four traditional engineering areas.

Coursework Includes
- Problem Based Learning BME Lab
- Transport Phenomena in Biomedical Engineering
- Quantitative Systems and Synthetic Biology
- Biomedical Signal and Image Processing
- Biomechanics and Biomaterials
- Biomedical Design Practicum

Choose Your Pathway
- BME + Chemical and Biological Engineering (CBE)
- BME + Computer Engineering (CpE)
- BME + Electrical Engineering (EE)
- BME + Electrical Engineering with concentration in Lasers & Options (EE-L&O)
- BME + Mechanical Engineering (MECH)

Career Options
Medical device/instrumentation bioengineer • Pharmaceutical engineer
Prosthetic engineer • Biomaterials developer • Quality engineer
Bioimaging engineer • Tissue/artificial organ researcher or engineer
Clinical biomedical engineer • Biomedical scientist/researcher

SCHOOL OF BIOMEDICAL ENGINEERING
COLORADO STATE UNIVERSITY
www.engr.colostate.edu/abme

More information about the BME undergraduate program
Gain the foundation to create cutting-edge materials and products, design devices and processes to improve health and the environment.

### Program Overview

This program is designed to prepare students for boundless engineering career opportunities available upon graduation. Our students are passionate about designing innovations in renewable and sustainable energy, treating disease, addressing climate change, and ensuring a safe and clean environment.

### Coursework Includes

- Material and Energy Balances
- Chemical Engineering Thermodynamics
- Fundamentals of Biological Engineering
- Chemical and Biological Reactor Design
- Momentum and Heat Transfer Laboratory
- Mass Transfer and Separation Laboratory
- Chemical and Biological Engineering Design I and II
- Professional Development Seminar

### Minors and Specializations

- Popular options include minors in chemistry, environmental engineering, or interdisciplinary studies programs in biotechnology and biomedical engineering.
- Global and Environmental Sustainability
- Students may also elect to take courses to prepare for medical, veterinary, or law school.

### Career Options

Health care • Biotechnology and bioenergy • Pharmaceuticals
Bioremediation • Sustainability • Energy • Petrochemicals
Food processing • Specialty chemicals • Microelectronics • Polymers
Electronic and advanced materials • Environmental health and safety

Credit: www.engr.colostate.edu/cbe
Civil Engineering (CIVE)

Learn to use state-of-the-art methods to design, construct, and maintain resilient and sustainable infrastructure.

Program Overview

This program prepares students to solve some of the world’s most critical climate change, resiliency, and sustainability problems. Our students desire to build a better society and shape daily life, from highways and buildings to water systems and disaster prevention. Students will learn to repair, redesign, and rebuild aging infrastructure around the world.

Coursework Includes
- Engineering Systems and Decision Analysis
- Fluid Mechanics
- Infrastructure & Transportation Systems
- Basic Hydrology
- Soil Mechanics
- Design & Behavior of Steel Structures
- Design of Reinforced Concrete Structures
- First-year and Senior Design Projects

Popular Minors
- Global Environmental Sustainability
- Construction Management
- Business
- Environmental Health
- Sustainable Water Interdisciplinary Minor (SWIM)
- Spatial Information Management
- Biomedical Engineering

Career Options
- Structural engineering and design
- Land development and urban planning
- Energy infrastructure development
- Resilient infrastructure systems development
- Green infrastructure design
- Disaster prevention and resilience
- Mine tailings engineering
- Flood prediction, forecasting and control
- Community development
- River mechanics and stream restoration

More information about the CIVE undergraduate program
Computer Engineering (CpE)

Gain the knowledge to improve, advance, and protect intelligent computing systems.

Program Overview

Students take computer engineering courses starting in the first year. The curriculum progresses with technical electives that span computer science, electrical and computer engineering, and mathematics. Students gain the knowledge and skills to drive innovation in virtually any field, from healthcare to agriculture to space exploration.

Coursework Includes

- Circuit Theory Application
- Software Development with C++
- Systems Security
- Computer Organization and Architecture
- Embedded Systems and Machine Learning
- Electronics Principles
- Computer Networks
- Senior Design Project

Minors and Specializations

- Specializations include Aerospace Systems, Embedded & IoT Systems, Networks & Data, VLSI & Integrated Circuits.
- Computer Engineering can be paired with a degree in Biomedical Engineering. This dual bachelor’s degree program is completed in five years.

Career Options

- Computer hardware engineer
- Data engineer
- Software engineer
- Artificial intelligence designer
- Computer architect
- Cybersecurity engineer
- Startup IT administrator or designer
- Game developer

Extensive undergraduate research opportunities
Small class size and high teacher-to-student ratio
Education abroad opportunities
Hands-on laboratory experience

Accredited by the Engineering Accreditation Commission

More information about the CpE undergraduate program
Electrical Engineering (EE)

Learn to innovate and connect people with devices and systems that are beyond imagination.

Program Overview

This program provides students with the skills and knowledge to drive innovation in virtually any field: the smarts inside your smart home, satellites that measure weather and climate, the sensing technologies that tell a self-driving car to watch for obstacles, and the imaging tools that help physicians peer inside the human body. Learn how electrical engineering makes it all possible.

Coursework Includes

- Software Engineering
- System Security
- Fundamentals of Wind Energy
- Fundamentals of Robot Mechanics & Controls
- Modern Physics Lab
- Electromagnetic Fields and Devices
- Linear Systems Analysis
- Electronic Principles
- Digital Circuit Logic

Minors and Specializations

- Interested students have the option to complement their Electrical Engineering degree program with an area of specialization in Aerospace or Lasers & Optics.
- Electrical Engineering can be paired with a degree in Biomedical Engineering. This dual bachelor’s degree program is completed in five years.

Career Options

Aeronautical/aerospace engineer • Design engineer • Software engineer
Systems engineer • Robotics & automation engineer
Machine learning engineer • Project engineer • Optical engineer

Extensive undergraduate research opportunities
Small class size and high teacher-to-student ratio
Education abroad opportunities
Hands-on laboratory experience

ABET Accredited by the Engineering Accreditation Commission

More information about the EE undergraduate program

www.engr.colostate.edu/ece
Environmental Engineering (ENVE)

Learn to apply cutting-edge technologies to identify and design solutions for today’s most pressing environmental problems.

Program Overview

The curriculum is designed to prepare students to identify and design solutions for today’s environmental problems. Careful selection of technical electives allows students to specialize in a related field of interest, providing them with the scientific tools and practical knowledge they need to serve society.

Coursework Includes

- Engineering Systems and Decision Analysis
- Geoenvironmental Engineering
- Fundamentals of Environmental Engineering
- Air Quality Engineering
- Water Quality Analysis & Treatment
- Environmental Toxicology
- First-year and Senior Design Projects

Popular Minors

- Global Environmental Sustainability
- Construction Management
- Business
- Environmental Health
- Sustainable Water Interdisciplinary Minor (SWIM)
- Spatial Information Management
- Biomedical Engineering

Career Options

- Climate change mitigation and adaptation
- Energy resources development
- Water and wastewater treatment
- Air and water quality
- Groundwater remediation
- Ecological restoration
- Sustainability leadership
- Waste stewardship

Extensive undergraduate research opportunities

Small class size and high teacher-to-student ratio

Education abroad opportunities

Hands-on laboratory experience

Accredited by the Engineering Accreditation Commission

More information about the ENVE undergraduate program
Mechanical Engineering (MECH)

Learn to design, develop, and manufacture environmental, transportation, health, fabrication, and energy systems essential to people and their communities.

Program Overview

Students dive into mechanical engineering courses starting in their first year. Hands-on laboratory instruction provides an active learning environment designed to further develop students’ design, modeling, and analytical skills. Our students become ethical professionals who make an impact on society’s global challenges.

Coursework Includes

- Introduction to Manufacturing Processes
- Engineering Experimentation
- Thermodynamics
- Mechatronics & Measurement Systems
- Machine Design
- Thermal/Fluid Sciences Laboratory
- Mechanics & Thermodynamics of Flow Processes
- Engineering Design or Research Practicum

Concentrations and Specializations

- Students can select a concentration in aerospace engineering or advanced manufacturing. Credits count toward the 129-credit degree requirement.
- Mechanical Engineering can be paired with a degree in Biomedical Engineering. This dual bachelor’s degree program is completed in five years.
- Students may apply for a combined bachelor’s and master’s degree program to begin a graduate program during their senior year of undergraduate study.

Career Options

Aeronautical/aerospace engineer • Automotive engineer
Biomedical engineer • Field service engineer • Industrial engineer
Production engineer • Quality control manager • Consulting
Robotic engineer • Construction engineer • Energy engineer

Extensive undergraduate research opportunities
Small class size and high teacher-to-student ratio
Education abroad opportunities
Hands-on laboratory experience

Accredited by the Engineering Accreditation Commission

More information about the MECH undergraduate program
Engineering Open Option

Spend your first semester exploring different engineering disciplines before officially declaring your major.

Program Overview

Engineering Open Option provides incoming, first-year students the unique opportunity to use their first semester to explore different majors and make an informed decision.

Program Highlights

- Featuring small class size and high teacher-to-student ratio
- Meet professionals in the field
- Connect with engineering graduate students
- Take part in the Engineering Majors Fair to ask intentional questions of faculty, staff and students in each engineering major
- Specialized advising geared toward exploration and first year success

Engineering 101: Grand Challenges in Engineering

Explore the topics of sustainability, health, security, and the joy of living from a general engineering perspective to help narrow down the major right for you.

Major options

Students are assigned a dedicated open option advisor to provide guidance on majors and disciplines that fit their academic and career goals. During their first semester, students in Engineering Open Option declare their official major for degree completion from the following options:

- Biomedical: Through our multidisciplinary approach, students learn to create products and solutions to tackle problems in human and animal health.
- Chemical and Biological: Gain the foundation to create cutting-edge materials and products, design devices and processes to improve health and the environment.
- Civil: Gain the foundation needed to design, construct, and maintain our world's built environment and serve society.
- Computer: Gain the knowledge to improve, advance, and protect intelligent computing systems.
- Electrical: Learn to innovate and connect people with devices and systems that are beyond imagination.
- Environmental: Learn to apply cutting-edge technologies to identify and design solutions for today's most pressing environmental problems.
- Mechanical: Learn to design, develop and manufacture the machines vital to environmental, transportation, fabrication, and energy systems.

More information about the Open Option program