

Engineering

Engineering is the application of scientific and mathematical principles to design, build, and analyze structures, machines, systems, and processes. Students take engineering courses to prepare for majors in fields such as mechanical, aerospace, civil, and electrical engineering. Courses introduce foundational concepts in statics, dynamics, and electrical circuits. These courses also support preparation for transfer into four-year engineering programs. A bachelor's degree in engineering can lead to careers in industries such as aerospace, energy, construction, electronics, manufacturing, transportation, robotics, and product design.

Contact Information

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Courses

ENGR 130: Statics

Units: 3

Prerequisites: PHYS 151 and MATH 150, MATH 150H, or MATH 150S.

Acceptable for Credit: CSU

Lecture 3 hours.

Course Typically Offered: Fall

This course covers the fundamental principles of engineering statics to help understand and analyze static forces on a variety of structures and engineering applications. Topics include forces, moments, analysis of trusses and beams, center of gravity, friction, and mass moments of inertia.

ENGR 230: Dynamics

Units: 3

Prerequisites: ENGR 130.

Acceptable for Credit: CSU

Lecture 3 hours.

Course Typically Offered: Spring

This course covers the fundamental principles of engineering dynamics to help students understand and analyze the motion of bodies under the action of forces. Topics include kinematics, Newton's second law, and work-energy and momentum methods as they apply to both particles and rigid bodies.