

# ENGINEERING (ENGR)

## ENGR 1000 - Introduction to Engineering (1 Credit)

Introduces engineering profession, engineering design and practice; and the tools used by engineers to accomplish design. The specialties within engineering are described. Students are involved in application projects and use word processors, spreadsheets and engineering software. Note: ENGR 1000 cannot be substituted for ELEC 1201. Prereq: High school trigonometry. Repeatable. Max Hours: 3 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 3.

## ENGR 1100 - Fundamentals of Computational Innovation (3 Credits)

Provides a foundation in computational thinking and practices. Students learn to take advantage of computational power in problem solving by writing simple programs, studying the underlying logic of hardware, and working with a variety of technologies. Cross-listed with IWKS 2300 and MECH 1100. Max hours: 3 Credits.

Grading Basis: Letter Grade

## ENGR 1111 - Psychological and Social Implications of Technology (3 Credits)

This course will explore the impact of technology and its advances on human beings from an emotional, psychological, and social perspective. Discussions will include ethical, moral, and multicultural implications of technological advances from a global perspective and will require students to critically analyze issues that arise from such advances. Max Hours: 3 Credits.

Grading Basis: Letter Grade

Restriction: Restricted to majors with 12 credit hours or less at CU Denver.

## ENGR 1130 - Chemistry for Engineers (5 Credits)

An introductory lecture and recitation course designed to meet the general chemistry requirement for engineering students. Topics include atoms, molecules, moles, stoichiometry, chemical bonding, atomic & molecular structures, thermodynamics and kinetics. The course will highlight the application of chemistry to engineering disciplines. Note: Suggested background of one year of high school chemistry or CHEM 1000 and MATH 1110 (or high school equivalent) strongly recommended. Max Hours: 5 Credits.

Grading Basis: Letter Grade

## ENGR 1200 - Fundamentals of Engineering Design Innovation (3 Credits)

This course introduces concepts of engineering design innovation at a variety of scales and disciplines. Participants will experience and explore core technology and design themes including design principles, processes, methods, modes of thinking, and social and cultural aspects or design. Cross-listed with CSCI 1200, CVEN 1200, MECH 1200, ELEC 1201 and IWKS 2100. Max hours: 3 Credits.

Grading Basis: Letter Grade

## ENGR 1208 - Special Topics (3 Credits)

Restriction: Restricted to Engineering and pre-engineering students only. Repeatable. Max hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

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## ENGR 1218 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 1228 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 1238 - Special Topics (1-3 Credits)

Repeatable. Max hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 1248 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 1258 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 1268 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 1278 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 1288 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 1298 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 2208 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 2218 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 2228 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 2238 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 2248 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

## ENGR 2258 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

ENGR 2268 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 2278 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 2288 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 2298 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 3208 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 3218 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 3228 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 3238 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 3248 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 3258 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 3268 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 3278 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 3288 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 3298 - Special Topics (1-3 Credits)  
Repeatable. Max Hours: 9 Credits.  
Grading Basis: Letter Grade  
Repeatable. Max Credits: 9.

ENGR 3400 - Technology and Culture (3 Credits)  
Explores the cultural and political foundations of technology and the impact of technology upon the individual and society. Contributions to technological advances and the impact of technology on women and diverse ethnic groups are examined in the context of specific engineering designs and case studies. (Satisfies the multicultural diversity requirement of the UCDHSC core curriculum). Max hours: 3 Credits.

Grading Basis: Letter Grade

Additional Information: Denver Core Requirement, Cultural Diversity.

ENGR 3600 - International Dimensions of Technology and Culture (3 Credits)

This course provides students with an understanding of how science, technology and international issues interrelate in a world that has become more interconnected and interdependent. The course will focus on the technical, organizational and cultural aspects of information and other technologies with an emphasis on their impact on third world countries. (Satisfies the international perspectives requirement of the UCDHSC core curriculum). Max hours: 3 Credits.

Grading Basis: Letter Grade

Additional Information: Denver Core Requirement, International Perspectives.

ENGR 3995 - Global Technology, Business & Culture (3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

Typically Offered: Summer.

ENGR 4150 - Seminar: Special Topics in Engineering (1 Credit)

A flexible seminar format dealing with topics of special interest in engineering. Topics vary from semester to semester. Prereq: Senior standing. Cross-listed with ENGR 5150 and 7150. Max hours: 1 Credit.

Grading Basis: Letter Grade

Restriction: Restricted to senior standing or higher

Typically Offered: Fall, Spring.

ENGR 4208 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

ENGR 4218 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

ENGR 4228 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

ENGR 4238 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

ENGR 4248 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

ENGR 4258 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

ENGR 4268 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

ENGR 4278 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

ENGR 4288 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

ENGR 4298 - Special Topics (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.

ENGR 4800 - Science Engineering and Culture for Undergraduates (3 Credits)

Course for undergraduate international and limited English proficient (LEP) students to improve success in science and engineering degree programs through senior research paper writing, advanced STEM English skills and cross cultural training. Repeatable. Max Hours: 6 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 6.

ENGR 4840 - Independent Study (1-3 Credits)

Repeatable. Max Hours: 9 Credits.

Grading Basis: Letter Grade

Repeatable. Max Credits: 9.