

SIGNALS AND SYSTEMS - MINOR

A student graduating with a bachelor's degree from CU Boulder may also receive a minor in signals and systems, though the minor is not available to students earning a Bachelor of Science in Electrical Engineering or Electrical & Computer Engineering.

The minor provides training in control systems, digital signal processing or communications beyond the training usually received by science, mathematics and applied mathematics majors. It can also broaden the training of students majoring in other engineering fields to provide depth in signals and systems. The goal is to teach students the fundamentals of signals and systems and introduce them to laboratory applications.

Requirements

Prerequisites

Students admitted to the signals and systems minor must have a cumulative GPA of 2.700 or better. Prerequisites for the signals and systems minor are General Physics 2 (PHYS 1120) and a solid mathematics background in Fourier series, Laplace transforms, transfer functions and sinusoidal response. Some courses require a probability prerequisite, which may be met with ECEN 3810, APPM 3570, MATH 4510, STAT 3100 or an equivalent transfer course. A grade of C- or better is required in all prerequisite courses.

Required Courses and Credit Hours

This minor requires a minimum of 18 credit hours.

A cumulative GPA of 2.250 or better is required for courses used to satisfy the requirements of this minor. Each individual course that is counted toward this minor must be passed with a grade of D- or better (note that a C- or better grade is required in all prerequisite courses).

| Code | Title | Credit Hours |
|---|--|--------------|
| Required Courses | | |
| ECEN 2250 | Introduction to Circuits and Electronics | 3 |
| ECEN 2260 | Circuits as Systems | 3 |
| ECEN 3300 | Linear Systems | 3 |
| Electives | | |
| Choose the remaining 9 credits from any combination of the following theory and lab courses: ¹ | | 9 |
| ECEN 2360 | Programming Digital Systems | |
| ECEN 4138 | Control Systems Analysis | |
| ECEN 4638 | Control Systems Laboratory | |
| ECEN 4242 | Communication Theory | |
| ECEN 4652 | Communication Laboratory | |
| ECEN 4532 | Digital Signal Processing Laboratory | |
| ECEN 4632 | Introduction to Digital Filtering | |
| Total Credit Hours | | 18 |

¹ Students may petition to replace one of these courses with a 3-credit hour, 5000-level ECEN course in digital signal processing, communications or controls.