

# ELECTRICAL ENGINEERING - MASTER OF SCIENCE (MS)

The Department of Electrical, Computer & Energy Engineering (ECEE) offers degree options tailored to both working engineers looking to advance their careers and to those looking to pursue a career in academia. Research is concentrated in six broad areas:

- Photonics and quantum engineering
- Learning, information, network, communication and data sciences
- Computer engineering
- Systems and controls
- Electromagnetics, RF and microwaves
- Power electronics

For more information, visit the department's Prospective Students (<https://www.colorado.edu/ecee/academics/graduate-programs/master-science-electrical-engineering/degree-requirements/>) webpage.

## Distance Education Option

Students can take individual courses toward a master's degree or graduate certificate through distance education (online). For more information, connect with the individual graduate program directly.

## Coursera Option

The Master of Science in Electrical Engineering is also available as a completely online master's degree (<https://www.colorado.edu/ecee/msee/>) through the Coursera platform.

## Bachelor's–Accelerated Master's Degree Program

Students may earn this degree as part of the Bachelor's–Accelerated Master's (BAM) degree program, which allows currently enrolled CU Boulder undergraduate students the opportunity to earn a bachelor's and master's degree in a shorter period of time.

For more information, see the Accelerated Master's tab (<https://www.colorado.edu/ecee/undergraduate-program/degrees/bachelors-accelerated-masters-degree/>) for the associated bachelor's degree(s):

- Electrical and Computer Engineering - Bachelor of Science (BS) (<https://catalog.colorado.edu/undergraduate/colleges-schools/engineering-applied-science/programs-study/electrical-computer-energy-engineering/electrical-computer-engineering-bachelor-science-bs/#acceleratedmasterstext>)
- Electrical Engineering - Bachelor of Science (BS) (<https://catalog.colorado.edu/undergraduate/colleges-schools/engineering-applied-science/programs-study/electrical-computer-energy-engineering/electrical-engineering-bachelor-science-bs/#acceleratedmasterstext>)

## Requirements

- All MS students must complete a total of 30 credit hours of coursework (including thesis hours, if applicable) with a grade of C or better and a cumulative GPA of at least 3.00.

- At least 24 credit hours must be completed at the 5000 level or above, and at least 18 of those credits must be in sufficiently technical<sup>1</sup> ECEN courses.
- The remaining courses can also be ECEN 5000+ or in other STEM (Science, Tech, Engineering, Math) departments.
- *Optionally*, maximally 6 credit hours may be at the 4000+ level. However, all course work from ECEN, TLEN/CYBR, EMEN and ATLS *must solely be* at the 5000+ level.

For more information, visit the department's Master of Science (<http://www.colorado.edu/ecee/graduate-program/degrees-programs/master-science/>) webpage.

## Degree Plans

### Plan I: Thesis Option

Students must complete 4–6 credit hours of MS thesis. The total number of combined hours of independent study and thesis research shall not exceed 9 hours. The Plan I project culminates with an oral presentation and written thesis.

### Plan II: Non-Thesis Option

A maximum of 6 credit hours of independent study can be used toward the 30-credit-hour requirement. No thesis is required, and there is no cumulative examination.

## Time Limit

All degree requirements must be completed within four years of the date of commencing coursework. Most students complete the degree in two years.

<sup>1</sup> "Sufficiently technical" usually means the course requires at least one technical pre-requisite course, and that its primary focus is engineering/mathematical problem-solving rather than having a policy-based focus.