Department of Electrical, Computer, and Energy Engineering

Master of Science - Electrical Engineering

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Welcome

Welcome to the MS-EE, a cutting-edge program designed for the twenty-first century. Hosted on the internationally acclaimed Coursera learning platform, the MS-EE program offers graduate-level courses, graduate certificates, and a fully accredited Master’s Degree in Electrical Engineering. We hope you will join us in a new educational modality, one different from traditional online and residential programs alike.

The University of Colorado stands fully behind the degree: there are no qualifying designations on official CU Boulder transcripts, degrees, or certificates associated with it. The Program specifics are reviewed on the Electrical, Computer, and Energy Engineering department webpage. This document provides students with the policies governing the MS-EE. Overall, the program is governed by the University’s and Graduate School’s rules and policies. Because the MS-EE is unique among graduate programs at the University of Colorado Boulder in its modality, its admissions policies, and its course design, it also has a number of special policies. These policies are listed below and will be updated annually.

We welcome student contact. Prospective and enrolled students should feel free to reach out to course facilitators within their courses or to the ECEE graduate advisor (msee-support@colorado.edu) with questions.

We are proud for you to join our community and forge a new kind of education for the twenty-first century. Again, welcome to the MS-EE.

Vision

The MS-EE is founded on the principles of the Massive Open Online Course (MOOC) “revolution.” In 2012 a number of major research universities developed online teaching platforms that allowed tens of thousands of students to enroll in one course. Because MOOC technology allowed such greater access to education, it was widely heralded as a revolution in higher education that would disrupt the ways degrees are offered to the world.

Technology alone cannot change the world. Although MOOC technology opened up new possibilities in 2012, and has advanced since then, there has not been a disruptive revolution in higher education. This is because, with few exceptions, most MOOC degrees simply replicated the vision and practices of existing online programs.

Recognizing this, the Department of Electrical, Computer, and Energy Engineering at the University of Colorado Boulder developed the MS-EE degree program with a new vision for graduate education.

The degree presents three major innovations:
• **Access.** The MS-EE is designed to provide global access to graduate-level education. It seeks to educate the world. To this end it uses *performance-based admissions* rather than traditional admissions standards. Anyone who is able to do the work of a graduate-level electrical engineering course is welcome to enroll in our degree.

• **Curriculum.** The MS-EE curriculum is both modular and self-directed. The professors of Electrical Engineering have purposely broken down their semester-long courses into small modules and, although these modules naturally fit together in groups, we encourage our students to construct certificates and degree plans as they need.

The details of the MS-EE curriculum, courses, and certificates may be found here:

- The degree will have six major areas.
  - Embedded Systems
  - Photonics and Optics
  - Power Electronics
  - Control and Communications
  - Electromagnetics, RF, Microwaves, and Remote Sensing
  - Computer Engineering

- The degree curriculum will be made up of a broad variety of courses in areas across electrical engineering

- The degree will also contain graduate certificates, that register content-area mastery.

• **Learning.** The MS-EE is guided by the belief that *learning belongs to the learner*. To be successful in the MS-EE each student must commit to his or her learning by creating a clear plan of courses, a schedule for study, and a strategy for taking courses.

> As an essential part of learning strategy, we recommend that students explore the courses in non-credit format before taking them for credit. By beginning a course in a non-credit format, before switching to credit, you will be able to see if the course’s content, as well as the instructor’s style, fits your learning plan.

**Program Policies**

**Admissions**

The MS-EE degree utilizes *performance-based admissions* for enrollment. There is no traditional application for admission to the degree. Students do not need to take the GRE or
submit letters of recommendation or proof of language proficiency. Neither a prior degree nor university transcripts are required for admission. Because this is a purely online program, students do not need to complete a background check to enroll.

A student desiring admission to the MS-EE degree program must complete four required protocols:

1. The student must take one Pathway Specialization for credit with at least a grade of C in each Pathway course;
2. The student must achieve a computed pathway specialization grade-point average (GPA) of at least 3.00;
3. The student must have a cumulative GPA of at least 3.00 for all for-credit courses taken to date; and
4. The student must declare their intention to seek the degree, which they can do before, during, or after any work in a pathway specialization.

Upon completion of these four steps the student is admitted to the MS-EE degree program.

Students may successfully complete a designated pathway specialization and declare intent at any point in their academic journey.

Completion of a pathway specialization is not required for students to begin earning academic credit, only to earn the degree. Non-degree seeking students may enroll in for-credit courses.

All courses attempted and/or completed for credit will appear on an official CU Boulder transcript (unless dropped by the drop deadline) and will count toward the cumulative GPA.

Financial Information

Tuition

Tuition is assessed at a linear rate based on credit hours. It is anticipated that the tuition rate initially will be $667 per credit hour. Hence a student taking a course worth 0.8 credit hours would be assessed tuition of (0.8)($667) = $533.60. Please refer to the Bursar Office’s website for officially published tuition rates. Students are granted access to for-credit components of a course after their tuition has been paid and verified.

Former or current CU Boulder students wishing to enroll in the MS-EE, but carrying unpaid debts, will have these items automatically deducted before the for-credit tuition charges are paid.

The CU Employee Tuition Assistance Benefit cannot be applied towards the MS-EE program.

Student Fees

No standard campus fees shall be charged for this program. Students may be charged on an at-cost basis for such items as proctoring, credit card fees, and Career & Alumni Services.
Financial Aid
At this time, no federal financial aid will be administered in this program.

Courses and Curriculum

Non-Credit Courses and Specializations on Coursera
All MS-EE courses are hosted on the Coursera platform. A typical non-credit course includes content, discussion forums, and homework assignments of level and scope similar to assignments made in an equivalent on-campus course in the same subject. Many of the courses are organized into sequences called specializations. This term originates with Coursera. Non-credit students may use specializations to earn course and specialization completion certificates from Coursera, but non-credit courses and specializations do not carry CU Boulder credit and are not recorded on CU Boulder transcripts.

*The only time that students must complete a specialization sequence in full is the designated pathway specialization, necessary to gain admission to the degree.*

For-Credit Courses and CU Boulder Credentials
Non-credit courses are the foundation for for-credit courses. A course is not considered credit-bearing until a student enrolls in the for-credit session of the course by paying CU Boulder tuition. Enrolling in the for-credit session enables access to additional credit-bearing content and proctored assessments.

A student enrolled in a non-credit session of an MS-EE course may elect to change to the for-credit version of the course at any time, including after completion of the non-credit course. Work performed in the non-credit portion of the course (e.g. assignments and quizzes) automatically transfers with the student to the for-credit option and the student can then continue to complete the remaining homework, exams, and lessons.

The for-credit session CU Boulder courses on Coursera include proctored assessments. Some courses may utilize project-based assignments.

Individuals may take for-credit CU Boulder courses on Coursera as either non-degree-seeking students (in which case they do not seek admission to the MS-EE degree) or as degree-seeking students (in which case they have followed the four steps to enroll in the MS-EE degree).

Prerequisites and Assumed Background Knowledge
There are no course prerequisites or corequisites for MS-EE courses. Nevertheless, it is important that students are prepared for individual courses. Course descriptions will advise students of assumed incoming knowledge, and students are strongly encouraged to take course sequences in the order they are presented on the Coursera platform. *Students are also encouraged to take a non-credit version in some form before moving to the for-credit version to test whether they can succeed.*
Courses and Fractional Credit Hours

The credit hour value of each MS-EE course is tightly tailored to the course content. Roughly, one week of on-campus instruction in a 3-credit 15 week course equates to 0.2 credits in the MS-EE. Individual courses in the program range from approximately 0.6 to 2 credit hours, with an anticipated completion timeline of between four and six weeks. The program’s fractional credit hour system reflects its commitment to maintaining the rigor of the on-campus experience in an online setting by narrowing and focusing the content on a specific topic.

Calendar and Course Sessions

Non-credit course sessions are typically self-paced with assignment due dates programmed and updated by the Coursera platform.

For-credit sessions run in 8-week increments throughout the calendar year, so students will have the ability to upgrade and take a course for credit, complete coursework and any additional for-credit requirements, and earn credit and a grade in a fashion approximating an on-demand service.

Students enrolled in a for-credit session will be expected to complete and submit work by the 8-week session end date. At the end of a for-credit session, the session closes; all enrolled students are assigned a letter grade.

We look forward to your success in this program. To that end:

Especially for your very first session, we recommend you start out light—just 1 or 2 courses for your first 8-week session. By doing so, you can best determine time commitment and work load. You will then have a better idea about future session planning.

If you want to complete the degree in 2 years, you’ll need to take 2-3 courses per 8-week session.

Final exam calendar

You will be able to take your MS-EE course final exams using the ProctorU remote proctoring service between 9am Mountain time on the day your class session starts and 5pm Mountain time on the day your class session ends.

You must schedule your exam at least **72 hours in advance** of your desired day and time. Example: If the exam availability window closes at 5:00pm on a Friday, the last time you could schedule an exam would be that Tuesday at 4:50pm.

To secure your desired exam session time, log into ProctorU to schedule your session as soon as you know your desired exams session date and time.

View the [final exam availability calendar](#) for your session.
Graduate Certificates

Students may enroll in graduate certificates as either non-degree-seeking or degree-seeking students. A graduate certificate is a sequence of courses totaling 9-12 credit hours that has been approved by the Graduate School at CU Boulder. Students must have a cumulative certificate GPA of courses being used toward the certificate, separately computed, of 3.00 or higher to earn a certificate. Certificate courses in which grades below C (2.0) are received may not be applied toward the certificate requirements but will count toward the overall cumulative GPA. The graduate certificate credential is conferred by the CU Boulder campus. Typically, a Pathway Specialization is the first sequence of courses in a prescribed CU Boulder graduate certificate.

Degree-seeking students may stack one or more CU Boulder graduate certificates as part of their work toward the 30-credit MS-EE.

Certificates have been designed by faculty to address distinct domains of knowledge. Recognizing that some courses teach foundational knowledge that applies across different domains, certificates for the MS-EE degree can have up to 3 credits double counted between them.

Master's Degree

The MS-EE requires a minimum of 30 credit hours of approved, degree-eligible graduate-level coursework and a minimum cumulative grade-point average (GPA) of 3.00. Courses in which grades below C (2.0) are received may not be applied toward the degree, but will count toward the cumulative GPA.

Transfer of Credit

Due to the pilot nature of this program, credit earned at other institutions or in other programs at the University of Colorado Boulder are not transferable to the MS-EE.

Credits taken as part of the MS-EE program may be transferred to other CU Boulder graduate degree programs at the discretion of the program and of the Graduate School in accordance with program-specific requirements and Graduate School rules.

Other institutions may accept transfer credit from the MS-EE program at their discretion, based upon their transfer of credit standards.

Academic Records and Policies for For-Credit Courses

Course Repetition and Replacement

**Course Repetition:** The cumulative GPA and credit totals are based on all courses attempted. Students may repeat as many different courses as they like, but they can only repeat the same course once, regardless of the grade they earn. Course attempts that result in a “W” (withdrawal) are not counted in the two attempts.
**Grade Replacement:** The Grade Replacement Policy allows students admitted to the MS-EE degree program to replace up to six credits in the cumulative GPA calculation. In this process, all courses attempted will still appear on the transcript, but only the last attempt will be calculated in the cumulative GPA and credit totals.

**Course Drops, Tuition Refunds, Withdrawals, and Grades**

Because the MS-EE has flexible course start dates, all drops, tuition refunds, withdrawals and grades are handled at the individual course level. It is the student’s responsibility to monitor these deadlines. Coursera and CU Boulder are not responsible for notifying the students of these deadlines. To drop or withdraw from a course please complete the appropriate form on the [CU Boulder Office of the Registrar website](#).

**Course Drop and Refund:** Each student may drop a class if they are within 14 days from the class start date or their enrollment date (whichever is later).

To receive a full refund, two requirements must be met: each student must submit a drop request within 14 days from the class start date or their enrollment date, whichever is later; and they must not have accessed restricted content in the course. A refund will be returned to their credit card in 7-10 business days. When a course is dropped under these conditions, it will not appear on the student’s record.

**Withdrawal:** Students who request to drop the course after the 14-day period and who have not accessed the timed proctored assessment may withdraw from the course but will not receive a refund. When a student withdraws from a course under these conditions, the student will receive a grade of W on their academic record. W grades have no bearing on the GPA and credit total.

**Grades:** Students who access a timed proctored assessment are ineligible for a drop, withdrawal, or refund, and are assigned a grade.

Upon completion of all required coursework or at the session end date, a letter grade is recorded on the student’s CU Boulder transcript.

Grades of Incomplete (I) are not assigned as part of the program, and Pass-Fail grading basis (P/F) is not offered.

**Academic Standing, Time Limit, Discontinuance, and Withdrawal**

Degree-seeking students admitted to the MS-EE are expected to maintain a cumulative GPA of 3.00 or higher for good academic standing in the program and to earn the degree. If a student’s cumulative GPA falls below 3.00, the student is considered in academic recovery.

The student will remain in academic recovery until the cumulative GPA is raised to 3.00, at which point the student is returned to good academic standing. The MS-EE degree cannot be awarded until the minimum 3.00 cumulative GPA has been achieved.
If a student’s cumulative GPA falls below 2.50, they will be academically dismissed from the degree program. Such students may continue to take for-credit courses as non-degree-seeking and may be able to earn a certificate but cannot earn a degree. To be reinstated to the degree program after dismissal, the student must raise their cumulative GPA to 3.00 and complete the other requirements for admission, including the successful completion of a new pathway specialization.

Time Limit
Courses used toward the degree must be completed within 8 years. Courses taken more than 8 years prior to graduation will appear on the transcript and be calculated in the cumulative GPA but may not be used toward the degree. Students may continue to pursue the degree even after eight years, but they must accrue 30 credits within an 8-year window in order to earn the degree.

The 8-year restriction is applied to courses on a rolling basis and is determined by the date that credit was awarded in the course.

Discontinuance
Students admitted to the MS-EE degree program are not otherwise required to take a minimum number of credit hours over any given period of time and are not required to apply for a leave of absence when not enrolled in courses. However, students admitted to the degree program who have not enrolled for two years will be discontinued until they enroll in a new for-credit course. At that point, the student will automatically be reinstated.

Program Withdrawal
Students may formally withdraw from the program by contacting the academic program advisor who will, in turn, notify the Office of the Registrar to discontinue the student.

Program Faculty, Course Facilitators, Degree Governance, and Student Support
All courses and specializations affiliated with the MS-EE are designed and taught by instructors with Graduate School faculty status.

Course facilitators—typically graduate students knowledgeable in the subject matter—will assist in administering courses. Course facilitators participate in the course discussion forums, respond to student feedback, address issues with the course and its features on the platform, and convey any relevant issues to the instructor of record and relevant program administrators.

Degree Governance
The MS-EE is overseen by a dedicated MS-EE program director, who works with the department chair, staff, and a course facilitator supervisor. The program director is charged with the day-to-day operations of the degree program, including budgetary oversight, chairing the
The MS-EE is governed by the MS-EE oversight committee. The MS-EE oversight committee is charged with overseeing the degree, adjudicating grade appeals, as well as reviewing its process and policies annually.

Student Services Provided to Enrollees in the Program

Academic Support
A student’s primary academic support will be via peer mentorship and course facilitators. Online academic support resources will also be supplied.

Graduate Advising for the Program
Students may contact the ECEE graduate advisor at msee-support@colorado.edu.

Career Services and Alumni Association
Students who are admitted into the degree will receive lifelong access to Handshake via CU Boulder Career Services and the ForeverBuffs alumni network.

Diplomas
Degrees are conferred three times annually. Diplomas will be issued electronically. Paper diplomas are available upon request for a small fee.

Commencement
Students who graduate from the program and earn the MS-EE degree are welcome to attend on-campus graduation ceremonies but are not obligated to do so.

Academic Dishonesty and Honor Code
The University of Colorado Boulder takes issues of academic dishonesty extremely seriously.

Students in all of CU Boulder’s courses, whether not-for-credit or for-credit are expected to perform to the highest standards of academic honesty.

Students enrolled in for-credit courses are members of the CU Boulder community and are subject to the Honor Code Office’s policies and procedures. Information on the Honor Code can be found at the Honor Code Office website.

Students who violate the Honor Code are subject to discipline. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threats, unauthorized access to academic materials, submitting the same or similar work in more than one course without
permission from all course instructors involved, and aiding academic dishonesty. Students are specifically expected to turn in original work and cite portions created by other authors. If a student has doubts regarding what collaboration is permissible in the course, the student should consult the discussion forums or the course facilitator directly.

Any suspected violations of the Honor Code, including reports of violation from the MS-EE’s proctoring service, will be submitted to the CU Boulder Honor Code Office (honor@colorado.edu; 303-492-5550).

The instructor of record has jurisdiction over all academic penalties for Academic Dishonesty. As policy, students found to have violated University rules on Academic Dishonesty will receive an “F” in the course in which the violation occurred. Instructors of record have up to 40 days from discovery of a suspected violation to report the incident to the Honor Code Office.

Non-academic sanctions may also be imposed by the by the Honor Code Office’s Student Conduct and Conflict Resolution Committee for students found responsible.

Grade replacement will not apply in cases of Honor Code violation.

Petition, Appeal, and Grievance Issues

Petitions, appeals, connectivity issues, and grievances should be handled at the lowest level possible, within the individual course if appropriate. This policy applies to platform as well as discussion forum, course content, assessment, and degree issues.

Concerns regarding platform issues should be directed to Coursera’s technical support team.

Concerns regarding discussion forum, content, assessment, and degree issues should be brought directly to the individual course’s course facilitator. If the course facilitator cannot resolve the issue, he or she will escalate the issue through the following resolution hierarchy:

1. Course Facilitator
2. Course Facilitator Supervisor
3. Instructor of Record
4. Program Director & Departmental Graduate Director
5. Oversight Committee
6. Departmental Chair
7. College Dean

Concerns regarding the degree itself, and not having to do with a particular course, follow a different pathway. These should begin with the Graduate Advisor, and then move accordingly:

1. Graduate Advisor
In all cases, the program policy is to resolve student concerns at the lowest level possible, without escalation.

Connectivity Issues

Students are responsible for ensuring that they have a stable exam environment when taking proctored assessments. Coursera and CU Boulder are not responsible for internet connectivity issues.

Grade Appeals

The instructor of record has primary authority and responsibility in all aspects of evaluating student course performance and assigning grades.

If a student believes that a course grade is incorrect, the student should first contact the course facilitator. If the course facilitator and the supervisor cannot resolve the issue, they will escalate it to the instructor of record. Failing resolution at this level, the student may make a formal, written grade appeal to the MS-EE program director.

The written grade appeal must document the basis for the appeal and should state the specific remedy desired by the student. The appeal should include the following information:

1. The student’s name
2. The course, section, and date
3. The details of the case, including the steps taken to resolve and, if a specific test or homework is concerned, the nature of the problem.
4. The student’s desired outcome.

The appeal must be submitted within 30 days of the conclusion of the course. The instructor of record will be given an opportunity to respond in writing to the program director regarding the student’s appeal.

If the program director finds that the grade has been improperly or unprofessionally assigned, he or she can forward the appeal to the oversight committee. Under these circumstances, the program director will present the case, but will not vote and will defer leadership to the Department graduate faculty director, who will vote and write the case. Within 30 days, the committee will recommend that either (1) the original grade stands, or (2) that a revised grade be assigned. The committee will submit a short written statement summarizing the reasons for its recommendation. Only faculty on the MS-EE oversight committee may vote on grade appeals.
In cases where the instructor or student do not agree with the committee recommendation, the department chair shall submit all materials to the Dean of the College of Engineering and Applied Science (or a designee), who will make a final decision on the student’s grade appeal. There is no further appeal.

Grievances
The MS-EE follows graduate school policy for Grievances. Additionally, the University of Colorado Boulder has a guide for information related to appeals, complaints, and grievances, including those for distance and online students.

As with all issues of complaint, the student should initiate any grievance matters with the course facilitators, who will attempt to resolve the grievance, in consultation with course facilitator supervisor, the program director, and the departmental graduate director.

Students may elect at any time to utilize the graduate school’s Grievance Process and Procedure, initiating it by turning to the Graduate School website, including the Graduate Student Grievance form. The student must first file a grievance through the department, and may file an appeal to the Graduate School if the issue is not resolved through the departmental process.

Accommodations for students with disabilities
The University of Colorado Boulder supports students with special needs. If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to the Online Program Course Coordinator in a timely manner so that your needs can be addressed.

The Office of Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the Disability Services website. Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition or injury, see Temporary Medical Conditions under the Students tab on the Disability Services website and discuss your needs with the Online Program Course Coordinator.

OIEC/reporting
CU Boulder is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, intimate partner abuse (including dating or domestic violence), stalking, protected-class discrimination or harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or cureport@colorado.edu. Information about the OIEC, university policies, reporting options, and other resources can be found on the OIEC website.
Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about reporting options and support resources. This applies regardless of where or when an incident occurs as long as it involves a member of the CU Boulder community.

The Higher Education Opportunity Act, State Authorization Reciprocity Agreements (SARA), and Complaints

The Higher Education Opportunity Act requires institutions of higher education to disclose and make available to current and prospective students safety-related, financial, graduation rate, athletics, and cost information, as well as instructions on how to obtain more information.

Students may review these required disclosures for CU Boulder at the Student Right To Know website.

The University of Colorado is part of the State Authorization Reciprocity Agreement (SARA) Network, which provides special notices and processes for distance students. Information on SARA and the SARA complaint process may be found at:

- SARA and Students
- SARA Complaint Process

**Students Located Outside of Colorado:** If a student located in a state outside of Colorado has a complaint that involves distance learning that student must first seek resolution with the University of Colorado Boulder by filing a complaint. If the student bringing the complaint is not satisfied with the outcome of the university’s internal processes, the student may file a complaint with university’s SARA portal, here: Colorado Department of Higher Education.

The University of Colorado Boulder also provides a list of all state contacts for filing complaints should the person wish to pursue these venues.

**Students located in California** may direct complaints to:

California Department of Consumer Affairs
Consumer Information Center
1625 North Market Blvd., Suite N-112
Sacramento, California 95834
Telephone: (833) 942-1120

dca@dca.ca.gov
If all other avenues provided have been exhausted, unresolved complaints may be filed with the [Higher Learning Commission](https://www.hlcommission.org), the University’s regional accreditor.

Higher Learning Commission  
230 South LaSalle Street, Suite 7-500  
Chicago, IL 60604  
Telephone: 800-621-7440  
info@hlcommission.org  
[www.hlcommission.org](http://www.hlcommission.org)

**International Students:** International Students are advised to understand and be apprised of the norms, rules, regulations, and requirements related to online distance education programs in their country of residence, particularly if the country will charge any additional taxes, withholdings or fees associated with online distance education programs.