M.S.E.E. Requirements
Electrical and Computer Engineering Department
University of Colorado at Colorado Springs

1 INTRODUCTION

This manual is intended as a basic guide to M.S.E.E. students, laying out the requirements of the program. Please note that these rules are in addition to the Graduate School rules (See http://web.uccs.edu/gradschl/gradpage.html).

2 ADMISSION

2.1 Guaranteed early admission

A student who is in his or her final semester studying toward either a B.S.E.E. or B.S.Cp.E. degree at CU, Colorado Springs is guaranteed admission to the M.S.E.E. program if he or she satisfies the following criteria:

1. The student must have completed a minimum of 45 semester hours at CU, Colorado Springs at the time of graduation with the B.S. degree.
2. The student must be registered in his or her final undergraduate semester (in either the B.S.E.E. or B.S.Cp.E. programs) at the time of application to the M.S.E.E. program.
3. The student must have a minimum undergraduate GPA of 3.25.

Early admission is not available to students who are not residents of the United States of America.

2.2 Regular admission

Regular admission to the M.S.E.E. program requires a 3.0 undergraduate grade-point-average (GPA). The Graduate Records Examination (GRE) is required of any student who falls below this GPA, is not a graduate of an ABET accredited undergraduate program in electrical engineering, or who is a graduate of a foreign university. If the student has an unacceptable undergraduate GPA, but has achieved a graduate GPA of 3.25 or better on a minimum of 15 semester hours of relevant graduate work (e.g., taken as an unclassified student, or at another university), then the student may be accepted into the program (note that units completed before admission may not all be transferable into a graduate degree program).

Graduates of foreign universities who are applying from outside the USA are required to take the TOEFL exam: A score of 550–600 on the paper-based exam, or of 213–250 on the computer-based exam is required. If the student has completed at least one year full-time academic study at a U.S. institution at the time of application, if English is his or her native language, or if he or she can demonstrate fluency in English in person to the ECE Graduate Program Director, the requirement to take the TOEFL may be waived.

Students not admitted on a regular basis may be admitted on a provisional basis depending on their overall application file, including GPA, GRE, letters of recommendation, etc. Students admitted on a provisional basis are often required to take remedial courses (these are specified in the letter of acceptance).

3 ACTION CHECKLIST AND TYPICAL TIMELINE FOR THE M.S.E.E. DEGREE

Once accepted, the student must:

1. Select an academic advisor and complete a Plan Of Study (POS). The POS must be approved by his or her academic advisor and by the ECE Graduate Program Director. This should be done by the end of the first semester of study.

2. Complete the coursework specified in his or her POS. Any transfer of credit must occur prior to the semester in which he or she will graduate.

3. If the student has elected the thesis option, he or she must
   (a) Complete the required research and write a thesis (This process occurs in parallel to some of the items discussed below).
   (b) Notify the ECE department of plans to graduate at the beginning of the semester during which the student plans to graduate. Completed diploma card and Application for Admission to Candidacy for an Advanced Degree (available in ECE office) must be submitted at this time as well.
   (c) Form an M.S.E.E. Thesis Committee and select a second reader a minimum of sixty days prior to the defense.
   (d) Notify the ECE department of the thesis defense date (a minimum of one month prior to thesis defense). Get department thesis covers and log number from the ECE department.
   (e) Submit final draft form of written thesis to Thesis Committee a minimum of one week prior to the thesis defense.
   (f) Successfully defend the thesis in an oral defense. The student must be registered for the semester during which the defense occurs.
   (g) Obtain approval from the Thesis Committee Chairman that the written thesis meets all format requirements.
   (h) Obtain approval (and signatures) from all Thesis Committee members that the written thesis has acceptable content.
   (i) Forward one bound copy of thesis to the ECE department, one bound copy to each Thesis Committee member, and two unbound copies to the Library by the semester deadline.

If the student has elected the non-thesis option, he or she
   (a) Must form an M.S.E.E. Advisory Committee consisting of the academic advisor and at least one other Graduate Faculty.
   (b) Notify the ECE department of plans to graduate at the beginning of the semester during which the student plans to graduate. Completed diploma card and Application for Admission to Candidacy for an Advanced Degree (available in ECE office) must be submitted at this time as well.
   (c) Must successfully complete a final examination consisting of two parts
      i. An oral presentation and a written report on a subject chosen by the student and approved by the Advisory Committee, and
      ii. A general written examination in his or her concentration area.

4. Commencement ceremony is held in May. Students become a graduate the semester they complete all requirements.

Note: The student must meet all deadlines in the Schedule of Deadlines for Graduate Degree Candidates published annually by the UCCS Graduate School.

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4 DURATION OF PROGRAM

The completion of the M.S.E.E. degree is normally accomplished in one to three years, and must be accomplished in six years commencing with the beginning of course work.

A student becomes “inactive” if he or she fails to register for three consecutive semesters. An inactive student must reapply to the program in order to continue studies. An application fee will be charged only if one or more of the following apply:

- Semester of most recent registration was more than six years prior to date of reapplication,
- One or more courses have been taken at another institution subsequent to most recent registration at UCCS,
- Coursework completed more than six years prior to date of reapplication will be applied to the degree.

5 ADVISOR AND PLAN-OF-STUDY

The student should choose an academic advisor and complete a Plan Of Study (POS), with input from his or her advisor, by the end of the first semester of residence in the M.S.E.E. program. The POS must be approved by both the academic advisor and by the ECE Graduate Program Director.

The academic advisor must be Graduate Faculty of the UCCS Graduate School, but need not be a member of the ECE faculty if approval has been obtained from the ECE Graduate Program Director.

6 COURSE REQUIREMENTS

The section outlines course requirements for the M.S.E.E. degree.

**Thesis option:**
- 30 semester hours total.
  - 24 semester hours of course work.
    - * At least 18 semester hours must be ECE courses. The remaining 6 semester hours may be replaced by allied department courses (e.g., computer science, mathematics, physics, mechanical and aerospace engineering, etc.).
    - * At most 6 semester hours may be independent study courses.
  - 6 semester hours of thesis credit.

**Non-Thesis option:**
- 30 semester hours total.
  - All 30 semester hours are course work.
    - * At least 24 semester hours must be ECE courses. The remaining 6 semester hours may be replaced by allied department courses (e.g., computer science, mathematics, physics, mechanical and aerospace engineering, etc.).
    - * At most 6 semester hours may be independent study.
- The student takes a final examination consisting of two parts:
  1. An oral presentation and a written report on a subject chosen by the student and approved by the advisory committee.
  2. A general written examination in his or her concentration area.
In either case:
- Cross-listed courses which are offered at the 400(0)/500(0) levels must be taken at the 500(0) level.
- All course work must be numbered 5000 and above if ECE, or 400(0) and above if non-ECE.
- Up to nine semester hours of accepted course work may be transferred from another university (including other universities of the CU system) or from course work taken as an unclassified student.

Acceptable Grades:
- The student must have an overall graduate GPA of 3.0 in order to graduate.
- The student must have a grade of C or better in all courses applied toward the M.S.E.E. degree.

7 THESIS

7.1 Thesis committee

Should the student elect to complete the “thesis option,” he or she will need to form a M.S.E.E. thesis defense committee. This committee consists of at least three persons, with the following stipulations:
- All members of the thesis committee must be Graduate Faculty or Associate Graduate Faculty of the UCCS Graduate School.
  - The chair of the thesis committee must be Graduate Faculty of the UCCS Graduate School.
  - There may be at most one Associate Graduate Faculty of the UCCS Graduate School on the thesis committee.
  - Individuals who are neither Graduate Faculty nor Associate Graduate Faculty of the UCCS Graduate School may not be voting members of an examination committee.
- The chair of the advisory committee must be in the faculty of the ECE department, although the chair need not be the student’s academic advisor. (This provision allows a student who is studying in a closely-related field to EE—such as some areas of physics, mathematics or mechanical and aerospace engineering—to achieve an M.S.E.E. while having an academic advisor from his or her own specialty field. Such a student must still be admitted to the M.S.E.E. program in the normal way and meet all other requirements for the degree.)
- At least one other member of the committee must be ECE faculty.
- Table 1 summarizes committee members and their required affiliations.

| TABLE 1  | M.S.E.E. THESIS COMMITTEE MEMBERS AND REQUIRED AFFILIATIONS. |
|-----------------------------------------------|
| Member | Affiliation |
| Committee Chair | ECE—Graduate Faculty |
| Member #2 | ECE—Graduate Faculty |
| Member #3 | Open—Graduate or Associate Graduate Faculty |
| Optional Members | Open—Graduate Faculty |
7.2 Thesis defense

The final oral defense of the thesis is taken at the completion of the work on the thesis after the first and second readers have approved its contents. This examination is open to anyone who wishes to attend. A successful candidate must receive the affirmative vote of a majority of the members of the thesis committee. In case of failure, the examination may be attempted once more after a period of time determined by the committee.

7.3 Written thesis

The M.S.E.E. thesis is a written, polished document reporting the results of the student’s investigation into an area of research. It must be written according to a departmentally approved format and enclosed in the department report cover. Each will be assigned a department report number EAS_ECE_xxxx_yy, where xxxx denotes the calendar year and yy denotes the report’s assigned number in the series, e.g., EAS_ECE_2000_12. The number will be assigned by the department after the student’s committee has approved the content of the final manuscript and the department has verified that the form of the thesis is in compliance with the department’s format for reports. A bound archive copy of the thesis will be presented to the department and to each committee member by the candidate by the date on which the library is to receive its copy of the work.

The following procedures will be adopted for submitting theses to the Graduate School for graduation:

1. All theses will be submitted by the student directly to the Technical Services Division of the Library after departmental approval is received.
2. Students will be responsible for compliance with all instructions in the UCCS Thesis & Dissertation Manual. Use the Manual, the Gold Checklist and the Schedule of Deadlines. The thesis is to be in the manuscript style of the IEEE transactions.
3. Theses will not be prechecked by the Graduate School. Questions concerning matters not discussed in the UCCS Thesis & Dissertation Manual must be directed to the ECE Department (see approval of “Content and Form,” below).
4. Copies submitted to the committee members prior to the final defense should be prepared in final draft format. The committee chairperson will sign a statement of “Approval of Format” (i.e., style of referencing, quality of figures and other text materials) and acknowledge that the final copy is consistent with “acceptable presentation standards of scholarly work in the discipline.” The signature must be original. This statement will not be bound into the thesis. You must get this signed statement from the ECE office prior to submitting your final thesis to the Library. The usual “approval page” (page 2 of the preliminary pages of the thesis) will be required and will be bound into the thesis.
5. Final copies will be judged acceptable or unacceptable based on the requirements stated in the UCCS Thesis & Dissertation Manual and the style designated by the department. If a thesis is not acceptable, corrections must be returned to the Library no later than 5:00 p.m. on the date indicated on the Schedule of Deadlines. If the deadline is missed, the student will be awarded their degree the following semester.
6. Out-of-state students who are mailing their final copies should send them to the committee chairperson (their advisor) for final review and the necessary statement of “approval” for the thesis (page 2 of the preliminary pages of the thesis). This must have been previously approved by their advisor.