Electrical and Computer Engineering

1. Change the curricular requirements of Computer Engineering (M.Engr. & M.S.):

   The Computer Engineering Program offers both Master of Science and Master of Engineering degrees. Both degrees may be earned through the Engineering Outreach off campus program. These advanced degrees offer engineering students an opportunity to strengthen their knowledge of computer engineering by taking graduate courses that focus on advanced subject matter and by participating in research.

   **Qualifications for Admittance.** Candidates must have a bachelor’s degree in computer engineering, with an undergraduate GPA of 3.00 or higher. International students who are required to take the TOEFL examination by the College of Graduate Studies must have a TOEFL score of at least 79 for the Internet-based Test (iBT) version, 213 for the computer version, or 550 for the paper version. All candidates must submit scores from the general portion of the Graduate Record Examination.

   Candidates who do not have a bachelor’s degree in computer engineering may be admitted to the graduate program if they meet the following minimum requirements.

   1. A bachelor’s degree in electrical engineering, computer science, or another engineering discipline or in a science supporting area of study, such as mathematics or physics.

   2. Demonstrated proficiency in the fundamentals of computer engineering emphasized in the undergraduate curriculum. Proficiency is demonstrated by successful completion of the following fundamental courses or their equivalents: CS 240, ECE 240, ECE 310, ECE 540, ECE 550, ECE 440, Math 310, and Math 330 (does not count for graduate credit). Fundamentals of Electronics (ECE 340). Digital Logic (ECE 240), Digital Systems Engineering (ECE 440). Students with undergraduate course deficiencies in the fundamentals of computer engineering must remove these deficiencies prior to admission for graduate work. Such deficiency courses cannot be used for graduate credit.

   3. Two advanced undergraduate courses in electrical engineering, computer engineering, or computer science equivalent to Computer Operating Systems (ECE 212), Power Area: Electric Power Systems (ECE 320), Digital Systems Engineering (ECE 440). Students with undergraduate course deficiencies in the advanced areas of computer engineering must remove these deficiencies either prior to admission or in the first three semesters of graduate work. Such deficiency courses cannot be used for graduate credit.

   Students may petition the graduate committee for exceptions to the required background list if their advisor or interim advisor approves.

   **Master of Science, Major in Computer Engineering.** To be approved, programs must satisfy both the university requirements governing the M.S. degree and must be enrolled in ECE 591, Electrical Engineering Research Colloquium, during each semester of on-campus enrollment.

   **Master of Engineering, Major in Computer Engineering.** To be approved, programs must satisfy both the university requirements governing the M.S. degree and must be enrolled in ECE 591, Electrical Engineering Research Colloquium, during each semester of on-campus enrollment.

   **Rationale:** Adopting similar admission policies in Computer Engineering and Electrical Engineering and clarifying how Candidates who do not have a bachelor’s degree in computer engineering or electrical engineering may be admitted to the graduate program.

2. Change the curricular requirements of Electrical Engineering (M.Engr. & M.S.):

   The Electrical Engineering Program offers Master of Science, Master of Engineering, and Ph.D. degrees. The Master of Science and Master of Engineering degrees may be earned through the Engineering Outreach off campus program. These advanced degrees offer engineering students an opportunity to strengthen their knowledge of electrical engineering by taking graduate courses that focus on advanced subject matter and by participating in research.

   **Qualifications for Admittance.** Candidates must have a bachelor’s degree in electrical engineering, with an undergraduate GPA of 3.00 or higher. International students who are required to take the TOEFL examination by the College of Graduate Studies must have a TOEFL score of at least 79 for the Internet-based Test (iBT) version, or 550 for the paper-based version. All candidates must submit scores from the general portion of the Graduate Record Examination.

   Candidates who do not have a bachelor’s degree in electrical engineering may be admitted to the graduate program if they meet the following minimum requirements in addition to the Electrical and Computer Engineering department and College of Graduate Studies admissions requirements.

   1. A bachelor’s degree in computer engineering, computer science, or another engineering discipline or in science such as mathematics or physics.

   2. Demonstrated proficiency in the fundamentals of electrical engineering emphasized in the undergraduate curriculum. For each area of emphasis in electrical engineering, proficiency is demonstrated by successful completion of the following fundamental courses or their equivalents. Power Area: ECE 212, ECE 320, ECE 329, ECE 350, ECE 359, ECE 420 (does not count for...
Students may petition the graduate committee for exceptions to the required background list if their advisor or interim advisor approves.

Master of Science, Major in Electrical Engineering. General M.S. requirements apply, except that the department requires at least 24 credits of course work in addition to a thesis. The master's program may provide advanced preparation for professional practice, or it may serve as the first step in graduate study leading to the Ph.D. degree. Specific courses to be taken for the program are not prescribed by the faculty. Students, with the assistance of their major professor, prepare their own program as soon as possible during their first semester, and submit it to the faculty for approval.

1. At least 18 credits in electrical engineering courses numbered 500 or above.
2. Two or more electrical engineering courses numbered above 500 in a given area for depth.
3. At least one course in each of two areas (outside the areas selected under item 2) to provide breadth.
4. Enrollment in ECE 591, Electrical Engineering Research Colloquium, during each semester of on-campus enrollment.

Master of Engineering, Major in Electrical Engineering. General M.Engr. requirements apply, except that the department requires at least 30 credits of course work. Students, with the assistance of their major professor, prepare their own program as soon as possible during their first semester, and submit it to the faculty for approval. To be approved, programs must satisfy both the university requirements governing the M.Engr. degree and the following department requirements:

1. At least 18 credits in electrical engineering courses numbered 500 or above.
2. At least three electrical engineering courses in a given area for depth, two of which must be numbered 500 or above.
3. At least one course in each of two areas (outside the areas selected under item 2) to provide breadth.
4. Enrollment in ECE 591, Electrical Engineering Research Colloquium, during each semester of on-campus enrollment.

Doctor of Philosophy, Major in Electrical Engineering. General Ph.D. requirements apply. The preliminary examination consists of both a written and an oral examination. There is no foreign language requirement. Two semesters of ECE 591, Electrical Engineering Research Colloquium, will be required for on-campus doctoral students.

Rationale: Adopting similar admission policies in Computer Engineering and Electrical Engineering and clarifying how Candidates who do not have a bachelor's degree in computer engineering or electrical engineering may be admitted to the graduate program.