

## Computer Engineering M.S. Degree Requirements

**Degree Requirements:** a minimum of 44 quarters units of graduate and upper division undergraduate courses in or related to the major subject area.

**Core Requirements** (12 units) – Three courses from CS 201 or CS 202, CS 203, CS 220, EE 213, CS/EE 217, EE255 with no grade lower than B-

**Technical Electives** (16 units) – Four 200-level courses from Computer Science or Electrical Engineering. Seminar courses (CS 260, CS 270-level courses, EE 260-level courses), CS 290, CS 297, CS 299 and EE 290, EE 297 and EE 299

**Additional Credits** (16 units): This category may be satisfied by a combination of the choices below:

- Additional graduate technical electives as described under above
  - Up to three of the undergraduate technical electives listed below  
CS 105, CS 111, CS 120B, CS 122A, CS 122B, CS 130, CS 141, CS 150, CS 152, CS160, CS 161L, CS 162, CS 164, CS 165, CS 166, CS 168, CS 169, CS 170, CS 171, CS 172, CS 177, CS 179 (E-Z), CS 180, CS 181, CS 183, EE 100B, EE 105, EE 115, EE 120B, EE 123, EE 128, EE 132, EE 133, EE 135, EE 141, EE 144, EE 146, EE 150, EE 151, EE 152, EE 165, EE 175A, EE 175B, ENGR 160 or
  - Up to two seminar classes (CS 260, EE 260 or similar classes)
  - With the pre-approval of the graduate advisor, any relevant 200-level courses from other departments in Engineering or outside. If pre-approval is not obtained, there is no guarantee that a class will be deemed relevant
- a. **COMPREHENSIVE EXAM** – A minimum of 44 units are required, of which 28 must be selected from the Core Requirement and Technical Electives courses. The remaining 16 units must be in approved graduate-level courses related to the major subject area, and/or approved Computer Engineering undergraduate technical electives. Research units (CS 290, CS 297, CS 299, EE 290, EE 297, EE 299) may not be used to satisfy any course requirements under this option.
- b. **PROJECT** – A minimum of 44 quarter units of graduate and upper division undergraduate courses in or related to the major subject area are required; of these at least 28 units must be in graduate courses taken at this University and must include 4 units of graduate research (typically, CS 297 or EE 297). Units obtained in graduate research for the thesis or dissertation (CS 299, EE 299) may not be used to satisfy any course requirements under this option.
- c. **THESIS** – A minimum of 44 quarter units of graduate and upper division undergraduate courses in or related to the major subject area are required. At least 28 of the units must be in graduate courses taken at this University; of these 8 must be graduate research units (CS 299 or EE 299). Units obtained in directed research or directed studies (CS 290, CS 297, EE 290, EE 297) may not be used to satisfy any course requirements under this option.

**Professional Development Requirement** – Satisfactory completion of one quarter of CS 287 (Colloquium in Computer Science) or EE 259 (Colloquium in Electrical Engineering) in one distinct quarter.

**Capstone Experience** – All students must complete a capstone experience that synthesizes and integrates the knowledge and skills obtained throughout the master's program, by either passing a comprehensive exam, writing a thesis, or completing a project.

**Comprehensive Examination Option** – In addition to the course requirements above, students must pass a comprehensive examination administered by the Computer Engineering Program.

**Project Option** – Students must complete a research project under the guidance of a faculty member. The project will be approved by a committee of at least two faculty members, at least one of whom is a faculty member in the Computer Engineering program, and requires a presentation and written report.

**Thesis Option** – Students must submit a master's thesis in accordance with the general requirements of the university. The thesis is original research work, and it should demonstrate the student's ability to study a research area, identify an open problem and make a research contribution. The thesis requires a presentation and must be approved by a committee of at least three faculty members.