MSCS: Option in Computer Engineering

- Students must complete a minimum of 30 graduate and approved upper-division course units (i.e., ten 3-unit classes).
- At least 21 units (7 classes) must be at the graduate level of instruction.
- You must maintain an average GPA of 3.0 to remain in good standing.

During the First Year Complete All§ Deficiencies:
- One year of OO programming
- CECS 301 Computer Logic Design II
- CECS 326 Operating Systems
- CECS 343 Intro. to Software
- CECS 346 Microproc. and Controllers I
- CECS 347 Microproc. and Controllers II
- CECS 360 Integrated Circuit Design Software
- CECS 440 Computer Architecture
- MATH 370A Applied Mathematics I

§ Entering students are limited to a maximum of 4 deficiencies.

Five Courses (15 units) of Required (“Core”) Courses Consisting of:

1. **CECS 460 System on Chip Design** (3) Prereq: CECS 360 with a grade of "C" or better.
2. **CECS 530 Advanced Computer Architecture I (3)** Prereq: CECS 341 or 440 with a grade of "C" or better.
3. **One course from the following:**
   - **CECS 531 Advanced Computer Architecture II (3)** Prereq: CECS 530 with a grade of "C" or better.
   - **CECS 546 Fault Tolerant Computing Systems (3)** Prereq: CECS 530 with a grade of "C" or better.
4. **One course from the following:**
   - **CECS 526 Advanced Operating Systems (3)** Prereq: CECS 228 and 326 all with a grade of "C" or better.
   - **CECS 528 Advanced Analysis of Algorithms (3)** Prereq: CECS 328, MATH 380 or EE 380 all with a grade of "C" or better.

- Requires Advancement to Candidacy
- Requires consent of instructor

Note: Courses may not be double-counted.

5. **One course from the following list of MSCS Application Courses:**
   - **CECS 521 Database Architecture**
   - **CECS 531 Advanced Computer Architecture II**
   - **CECS 543 Advanced Software Engineering**
   - **CECS 546 Fault Tolerant Computing Systems**
   - **CECS 572 Advanced Computer Networking**
   - **CECS 575 Object-Oriented Analysis & Design**
   - **CECS 579 Advanced Cryptography**

Comprehensive Examination

Thesis with an Oral Defense
- Requires a 3.3 GPA and a total of 6 units from the following (at least 3 units from CECS 698†):
  - CECS 697* Directed Research (1-3)
  - CECS 698* Thesis or Industrial Project (2-6)

Project with an Oral Defense
- Requires a 3.3 GPA and a total of 3 units of CECS 697* Directed Research (1-3)

NEW GRADUATE STUDENTS
- Conditional Admittance
- Classified Admittance
- Complete Prerequisite Course Worksheet

Advancement to Candidacy
To Advance students must have:
- Completed all deficiencies with grades of "C" or better;
- Attained an overall grade point average (GPA) of 3.0 and be in Good Standing;
- Completed at least 12 units in the core requirement applicable to the degree with a GPA of at least 3.0 for the completed MSCS units;
- Have fulfilled the Graduation Writing Assessment Requirement (GWAR); and have their program of studies approved by the CECS department graduate advisor.

Degree Awarded