

Curriculum Distribution Requirements for Graduate Degrees

Every graduate student in the Computer Engineering Graduate Program must successfully complete the following requirements.

- ◆ Architecture/Design requirement (3) – one of the following:
 - CS 6354 Computer Architecture
 - ECE 6435 Computer Architecture and Design

- ◆ Analysis requirement (3) - one of the following. Must include engineering analysis assessment (Note: This analysis requirement course may also be used to meet an Area Requirement.)
 - ECE 7438 Comp System Reliability Engineering
 - CS 7456 Models of Computing Systems
 - ECE 6415 Performance Analysis of Communication Networks
 - CS 6161 Design and Analysis of Algorithms

- ◆ Mathematics Requirement (3) - At least one (3) credit graduate level (5000 or above) mathematics course that is approved by the advisor or advisory committee. Approved courses include (APMA, MATH, ECE 6711, SYS 6005. Any exceptions must be approved by the CpE Graduate Committee.

- ◆ Computer Engineering Perspectives (no grade)

- ◆ Area Requirements (9) - Students must complete at least one course from each of these three different subject areas. Ask the program director about new or special topics courses. (NOTE: For the Ph.D. Degree, the student must receive a minimum grade of A- courses in the courses used to meet three area requirements.)

The (3) subject areas and their associated courses are:

Area 1: Hardware

ECE 6332 VLSI Design

ECE 5150 Integrated Circuit Fabrication Process

ECE 6660 Analog ICs
ECE 7332 Advanced VLSI Systems Design

Area 2: Software

CS 6250 Building Complex Software Systems
CS 6456 Operating Systems
CS 6161 Design and Analysis of Algorithms
CS 6240 Software Engineering
CS 7620 Advanced Compilers
CS 6610 Programming Languages
CS 6750 Databases
CS 8545 Topics in Operating Systems

Area 3: Computer Systems and Networks

CS 5487 Real Time Systems
ECE 6434 Dependable Computing Systems
CS 6444 Introduction to Parallel Computing
CS/ECE 6415 Performance Analysis Comm. Networks
ECE 7438 Comp. System Reliability Engineering
CS 7456 Models of Computing Systems
CS/ECE 7457 Computer Networks
CS 8535 Topics in Computer Architecture

- ◆ Electives - Courses taken at the graduate level to complete the 30 credit requirement. Electives can be graduate-level CS courses, ECE courses, or courses from other departments. A maximum of two courses (not including the Mathematics requirement) may be taken outside of the CS and ECE Departments. Any exceptions must be approved by the CpE Graduate Committee.

- ◆ Advanced and Special Topics Courses - The Program regularly offers variable content "Advanced Topics" or "Special Topics" courses that address new or emerging aspects in the field. They will be announced as far in advance as possible, including the area(s) that are covered by the course, and can be used to meet the area requirement in that area with approval of your advisor. Students are encouraged to explore such courses and file the necessary Distribution Course Form change accordingly.