

ENGINEERING (M.S.) COMPUTER ENGINEERING EMPHASIS

Mission

Provide a solid foundation in the design and implementation of computer systems emphasizing the development of both software and hardware. Provide an outstanding educational program that enables graduates to have a solid background in both theoretical and practical aspects of Computer Engineering to prepare them to make meaningful contributions to their profession. Provide an outstanding educational program that enables our graduates to become leaders in their profession by imparting fundamental principles, skills, and tools necessary to innovate and excel in engineering practice, research, or academia.

Program Objectives

1. Afford students the opportunity for in-depth study of Computer Engineering concepts and theories
2. Provide state-of-the-art applications and implementations in the design of computer based systems
3. Provide graduates with effective communications skills required for career advancement
4. Endow students with a sense of professionalism, professional ethics, and active participation in the affairs of the profession
5. Engage faculty and graduate students in meaningful Computer Engineering research
6. Promote professional development and growth of students and faculty

Degree Requirements

Thirty(30), or thirty-six (36), semester hours are required for the Master of Science Degree in Engineering depending upon which of the following three options the student selects with approval of his or her department chairperson and/or advisor.

Option 1 Twenty-four (24) semester hours of coursework plus a six-hour thesis

Option 2 Twenty-seven (27) semester hours of coursework plus a three-hour project

Option 3 Thirty-six (36) semester hours of coursework

Option 1 Requires a formal written thesis, formal presentation and oral exam.

Option 2 Requires a written project report, formal presentation and oral exam.

Option 3 Requires an oral exam.

To remain in "good standing," students must maintain a minimum cumulative grade point average (GPA) of 3.0 ("B average).

Core Courses

Each emphasis area has either three or four core courses (9 to 12 semester hours). Electives are selected with approval of the student's graduate committee and/or graduate advisor

Code	Title	Hours
CPE 508	OPERATING SYSTEMS	3
CPE 512	COMPUTER ARCHITECTURE	3
CPE 515	ADVANCED LOGIC DESIGN	3
CPE 541	COMPUTER NETWORK	3

Elective Courses

Code	Title	Hours
CPE 500	SOFTWARE ENGINEERING	3
CPE 505	ANALYSIS OF ALGORITHMS	3
CPE 520	ADVANCED ENGINEERING ANALYSIS	3
CPE 521	ADVANCED ENGINEERING ANALYSIS II	3
CPE 530	VLSI DESIGN	3
CPE 532	DIGITAL INTEGRATED CIRCUITS	3
CPE 552	COMPUTER VISION	3
CPE 555	CONTROL SYSTEMS	3
CPE 557	ROBOTICS	3
CPE 560	EMBEDDED DESIGN W/MICROPROCES	3
CPE 610	PARALLEL COMPUTING AND PROGRAM	3
CPE 693	ADVANCED TOPICS-IC DESIGN	3
CPE 697	INTERNSHIP	3
CPE 698	INDEPENDENT STUDY	1-4
CPE 699	THESIS	1-6