

# ENGINEERING (M.S.) CIVIL ENGINEERING EMPHASIS

## Mission

To provide graduate learning opportunities in civil engineering for acquiring the knowledge, skills and attitudes necessary for practice and life-long professional development; to contribute to the expansion of knowledge of civil engineering through research programs; and to provide professional and community service to the state, the nation, and the world.

## Program Objectives

1. Provide the depth and breathe in civil engineering topics necessary for civil engineering practice and development.
2. Provide graduate education in specialized civil engineering areas.
3. Contribute to the discovery of new knowledge and methods that enhance the theory and practice of civil engineering; and engage in meaningful service activities.
4. Provide an environment that promotes professional development, growth of the intellect, character, and spirit of students, faculty, and staff.

## Program 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

The students are required to select three courses among the list of core courses. The three courses must be approved by the Department prior to selection. The remaining courses may be chosen from the list of electives or from the other core courses with the approval of the student's advisor.

Code	Title	Hours
CIV 531	TRAFFIC ENGINEERING	3
CIV 542	ADVND DESIGN OF CONCRETE STRUC	3
CIV 550	ENGINEERING HYDROLOGY	3
CIV 672	ADVANCED GEOMECHANICS	3
CIV 673	ADVND FOUNDATION ENGINEERING	3

## Elective Courses

Code	Title	Hours
CIV 520	ADVANCED ENGINEERING ANALYLS I	3
CIV 521	ADVND ENGINEERING ANALYSIS II	3
CIV 535	PAVEMENT DESIGN	3
CIV 536	HIGHWAY ENGINEERING	3
CIV 544	ADVND DESIGN OF STEEL STRUCTURE	3
CIV 562	HAZARDOUS WASTE ENGINEERING	3
CIV 564	SURFACE WATER	3
CIV 567	ENVIRONMENTAL REMEDIATION	3
CIV 568	LAND DISPOSAL OF WASTE	3
CIV 631	LINEAR THEORY OF OCEAN WAVES	3
CIV 632	TIDES AND LONG WAVES	3
CIV 640	FINITE ELEMENT METHODS	3
CIV 642	PRESTRESSED CONCRETE DESIGN	3
CIV 650	SMALL WATERSHED HYDROLOGY	3
CIV 653	ADVND DESIGN OF HYDRAULIC STRUC	3
CIV 670	ROCK MECHANICS	3
CIV 675	EARTH DAMS AND SLOPES	3
CIV 680	UNSATURATED SOIL MECHANICS	3
CIV 681	EXCAVATION SUPPORT SYSMS & R S	3
CIV 682	COMPUTATIONAL GEOTECHNICS	3
CIV 683	SOIL STRUCTURE INTERACTION	3
CIV 684	ADVND SITE CHARACTER & INSTRUM	3
CIV 696	SEMINAR	1
CIV 697	INTERNSHIP	1-3
CIV 698	INDEPENDENT STUDY	1-4
CIV 699	THESIS RESEARCH	1-3