

ENGINEERING (PH.D.) CIVIL ENGINEERING EMPHASIS

CIV 696	SEMINAR	1
CIV 697	INTERNSHIP	1-3
CIV 698	INDEPENDENT STUDY	1-4

Department: Civil and Environmental Engineering

Civil Engineering: to prepare students for continued professional and scholarly development consistent with their technical interests in civil engineering by conducting a major independent and original research study with critical thinking.

A minimum of 72 credit hours beyond B.S. or 36 credit hours beyond M.S. degree. Must complete 24 hours of dissertation research, the required core courses, and elective courses. The adviser or the advising committee may recommend additional courses based on the students' background and the proposed research area.

Core Courses

Code	Title	Hours
Select three of the following courses: ¹		9
CIV 531	TRAFFIC ENGINEERING	
CIV 542	ADVND DESIGN OF CONCRETE STRUC	
CIV 550	ENGINEERING HYDROLOGY	
CIV 672	ADVANCED GEOMECHANICS	
CIV 673	ADVND FOUNDATION ENGINEERING	
Graduate level advanced mathematics course ¹		3
Total Hours		12

¹ After consultation and approval of the student's adviser.

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