

## MASTER OF SCIENCE IN CIVIL ENGINEERING

### Curriculum Structure

#### The Program (Total 36 Cr Hrs)

Curriculum Component	Number of Courses	Total Number Cr Hrs
Major Core	5	12
Major Elective	4	12
Thesis	1	12
<b>Total:</b>	<b>10</b>	<b>36</b>

#### Thesis Requirements (12 Cr Hrs)

Thesis course	
Course ID	Course Title
CVEN 699	Master Thesis

#### Major Core Requirements (12 Cr Hrs)

Major Core Requirements	
Course ID	Course Title
GENG 602	Applied Research Methodology
GENG 603	Advanced Numerical Analysis
GENG 604	Project Management
GENG 605	Applied Statistics Analysis
GENG 606	Graduate Seminar (0 Cr Hrs)

#### Major Electives (12 Cr Hrs)

Major Electives	
Course ID	Course Title
CVEN 610	Advanced Topics in Civil Engineering
CVEN 621	Advanced Topics in Design of Steel Structures
CVEN 622	Structural Dynamics and Earthquake Engineering
CVEN 623	Design of Highway Bridges
CVEN 611	Finite Element Method
CVEN 624	Theory of Plates and Shells
CVEN 630	Advanced Geo-mechanics
CVEN 661	Geometric Design of Highways
CVEN 662	Traffic Safety Analysis
CVEN 663	Pavement Management Systems

CVEN 640	Hydrology
CVEN 641	Analysis of Hydraulic Systems
CVEN 650	Ground Water Contamination
CVEN 660	Advanced Traffic Engineering

### STUDY PLAN

#### FIRST YEAR (18 Cr Hrs)

Term	Course #	Course Title	Cr Hrs
Fall	GENG 602	Applied Research Methodology	3
	GENG 603	Advanced Numerical Analysis	3
	GENG 604	Project Management	3
Total			9
Spring	GENG 605	Applied Statistics Techniques	3
	GENG 606	Graduate Seminar	0
	CVEN XXX	Technical Elective I	3
	CVEN 699	Master Thesis	3
Total			9

#### SECOND YEAR (18 Cr Hrs)

Term	Course #	Course Title	Cr Hrs
Fall	CVEN XXX	Technical Elective II	3
	CVEN XXX	Technical Elective III	3
	CVEN 699	Master Thesis	3
Total			9
Spring	CVEN XXX	Technical Elective IV	3
	CVEN 699	Master Thesis	6
Total			9