

MASTER OF SCIENCE IN CIVIL ENGINEERING

Curriculum Structure

The PhD Program (Total 36 Cr Hrs)

| Curriculum Components | Total Courses | Total Cr Hrs |
|-----------------------|---------------|--------------|
| Core Courses | 5 | 12 |
| Elective Courses | 4 | 12 |
| Thesis | 1 | 12 |
| Total | 10 | 36 |

Thesis Requirements

| Thesis course | |
|---------------|---------------|
| Course ID | Course Title |
| CVEN 699 | Master Thesis |

Major Core Courses

| Core courses | |
|--------------|------------------------------|
| 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 Elective Courses

| Elective courses | |
|------------------|--|
| 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

| First Semester (9 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 |
| Second Semester (9 Cr Hrs) | | | |
| Term | Course # | Course Title | Cr Hrs |
| 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

| Third Semester (9 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 |
| Fourth Semester (9 Cr Hrs) | | | |
| Term | Course # | Course Title | Cr Hrs |
| Spring | CVEN XXX | Technical Elective IV | 3 |
| | CVEN 699 | Master Thesis | 6 |
| Total | | | 9 |

