

Ph.D. in Engineering

Materials and Construction Systems Emphasis

Recommended Plan of Study

Required General Core Courses

Take the following 3 courses (9 SCH)

ENGR 641	Mathematics for Engineering and Science (<i>Fall</i>)
STAT 505	Statistics for Engineering and Science (<i>Winter</i>)
MATH 574	Numerical Solutions to PDEs (<i>Spring</i>)

Materials and Construction Systems Core Courses

Choose 4 of the following courses: (12 SCH)

CVEN 459	Introduction to Infrastructure Management
CVEN 580	Introduction to Trenchless Technology
ENGR 530	Engineering Experimentation and Research
MEMT 508	Finite Element Analysis
MEMT 511	Modern Engineering Materials
MEMT 563	Theory of Elasticity
MEMT 577	Advanced Strength of Materials

Materials and Construction Systems Elective Courses

Choose 9 of the following courses: 27 SCH (or from the courses not included in the student's program from the above core course lists (note: no more than two other graduate courses may be substituted for the courses in Materials and Construction Systems course lists. Also, such courses must be applicable to the area of thesis research and be approved by the student's committee)

CMEN 513	Transport Phenomena
CVEN 509	Dynamic Analysis of Structures
CVEN 510	Advanced Soil Mechanics
CVEN 517	Advanced Pavement Design
ENGR 566	Quality in Engineering
ENGR 590	Applications of Artificial Intelligence
ENGR 592	Engineering Computational Methods
ENGR 622	The Academic Enterprise
ENGR 631	Global Competitiveness and Management of Science and Technology
INEN 504	Systems Simulation
INEN 506	Dynamic Programming
INEN 509	Advanced Engineering Economy
MEMT 565	Continuum Mechanics
MEMT 588	Inelastic Deformations
MEMT xxx	Applied Finite Element Modeling
STAT 506	Regression Analysis
STAT 511	Design of Experiments
STAT 620	Theory of Probability
STAT 621	Theory of Statistics
STAT 651	Discrete Markov Processes

Research and Dissertation

Minimum 18 hours (ENGR 651).

3, 6 or 9 hours per quarter. Maximum total allowed is 30 hours.

Total: 48 SCH of courses + 18 SCH of Research & Dissertation = 66 SCH.