MASTER OF SCIENCE IN CIVIL ENGINEERING

COURSE REQUIREMENTS FOR SPECIALIZATION IN
ENVIRONMENTAL ENGINEERING

Core Courses: (at least 9 cr hrs required)

- CE 762 – Water Treatment Processes
- CE 766 – Wastewater Engineering: Biological Processes
- CE 861 – Environmental Engineering Chemistry
- CE 816 – Fate and Transport Processes*

Additional courses (at least 6 cr hrs required)

- CE 654 – Design of Groundwater Flow Systems
- CE 690 – Sustainable Water and Sanitation Systems*
- CE 751 – Hydraulics of Open Channels
- CE 790 – Sustainability and Green Engineering*
- CE 854 – Analysis of Groundwater Flow
- CE 863 – Water Supply and Wastewater Collection Systems
- CE 864 – Unit Operations and Processes in Environmental Engineering
- CE 866 – Advanced Wastewater Treatment
- CE 967 – Physicochemical Processes
- CE 970 – Advanced Topics in Environmental and Water Resources Engineering

Environmental Engineering Electives

- CE 625 – Principles of Geoenvironmental Engineering
- CE 790 - Problems in Civil Engineering
- CE 816 - Selected Topics in Civil Engineering
- CE 916 - Advanced Topics in Civil Engineering
- BAE 651 – Air Pollution Engineering
- BAE 665 – Ecological Engineering Design
- BAE 669 - Watershed Modeling
- BAE 869 - Advanced Watershed Modeling
- CHE 642 - Fundamentals of Conversion of Biorenewable Resources
- CHE 663 - Environmental and Ecological Risk Assessment
- CHE 715 - Biochemical Engineering
- CHE 725 - Biotransport Phenomena
- CHE 862 - Advanced Transport Phenomena I
- CHE 867 - Advanced Transport Phenomena II

Additional Electives

- AGRON 605 - Soil and Environmental Chemistry
- AGRON 905 - Advanced Soil Chemistry
- AGRON 816 - Soil Physics
- AGRON 901 - Environmental Instrumentation
- BIOL 612 - Freshwater Ecology
- BIOL 818 - Advanced Aquatic Ecology
- BIOL 826 - Nutrient Dynamics
- GEOG 508 - Geographic Information Systems I
- GEOG 608 - Geographic Information Systems II
- GEOL 650 - Geomicrobiology
- GEOL 711 - Water Resources Geochemistry
- GEOL 790 - Biogeochemical Reaction Modeling*
- GEOL 870 - Groundwater Contaminant Remediation
- GRAD 740 - Water and Society: Interdisciplinary Foundation
- MATH 632 - Elementary Partial Differential Equations
- MATH 655 - Elementary Numerical Analysis I
- MATH 656 - Elementary Numerical Analysis II
- STAT 704 - Analysis of Variance
- STAT 705 - Regression and Correlation Analyses
- STAT 716 - Nonparametric Statistics
- STAT 880 - Time Series Analysis

* courses with an asterisk are special topics or problems courses, and upon approval, their course numbers will change. Pending advisor and committee approval, other courses may be added to the program of study.