

# M.S. CIVIL ENGINEERING—GEOTECHNICAL and MATERIALS

## MASTERS OF SCIENCE in CIVIL ENGINEERING

Thesis Option	30 credit hours: 24 credit hours courses, 6 credit hours CE5559 Thesis
Project Option	30 credit hours: 27 credit hours courses, 3 credit hours CE5500 Problems
Coursework Option	30 credit hours: 30 credit hours courses

## ADVANCED MATH (MINIMUM OF 1 COURSE)

CE 5501-Optimization of Engineering Systems	(EVEN Spring Semesters)
CE 5516—Advanced Engineering Math	(EVEN Fall Semesters)
ME 5572-Advanced Statistics	(EVERY Spring Semesters)
or 400/500 course from MATH department,	(Discuss options with advisor)

## EMPHASIS CORE COURSES (MINIMUM OF 3 COURSES)

CE 5536-Advanced Soil Mechanics (ODD Fall Semesters)
CE 5531-Fundamentals of Geomaterial Characterization (EVEN Fall Semesters)
CE 5571-Advanced Portland Cement Concrete (ODD Spring Semesters)

## REGULARLY OFFERED ELECTIVE (MAXIMUM OF 5 COURSES)

CE 5501-Blast and Fire Resistance (EVERY Summer online)	CE 5554-River Stability and Scour (ODD Fall)
CE 5501-Construction Project Risk Management (EVERY Fall)	CE 5556-Urban Hydrology (ODD Fall)
CE 5501-Applied Soil Structure Interaction (EVEN Fall)	CE 5559-Environmental Compliance and Permitting (EVERY Spring)
CE 5501-Hazardous Waste Engineering (EVEN Spring)	CE 5563-Construction Law (EVERY Spring)
CE 5504-Project Management of Integrated Design and Construction (EVERY Spring)	CE 5568-Construction Planning and Scheduling (EVERY Fall)
CE 5505-Capital Projects Delivery Methods (EVERY Fall)	CE 5569-Construction Methods and Equipment (EVERY Spring)
CE 5517-Advanced Structures (EVERY Spring)	CE 5570-Corrosion Engineering (EVEN Spring)
CE 5521-Matrix Methods and FEM (ODD Fall)	CE 5573-Durability of Civil Engineering Materials (ODD Spring)
CE 5523-Advanced Steel Design (EVEN Fall)	CE 5575-Seismic Design (ODD Fall)
CE 5525-Prestressed Concrete (ODD Spring)	CE 5584-Pavement Design, Construction, Maintenance, and Rehabilitation (EVEN Spring)
CE 5527-Advanced Concrete Design (EVEN Spring)	CE 5679-Dynamics of Structures (ODD Spring)
CE 5542-Hydraulic Structures (EVEN Fall)	
CE 5537-Contracts and Law (EVERY Fall)	
CE 5552-Open Channel Flow (EVERY Spring)	
CE 5553-Hydraulics and Variability of Rivers (EVEN Fall)	