

MS in Civil and Environmental Engineering (Thesis)

Curriculum Checklist

Please refer to the program of study website below as your reference for course selection.

<https://engineering.uga.edu/degree/ms-civil-environmental-engineering/>

Student Name: _____

Student ID (810/811): _____ First Term of Enrollment: _____

The MS degree in Civil and Environmental Engineering under a thesis option requires a minimum of 33 credit hours in the Program of Study.

Subject/ Number		Hours	Title	Semester	Approved Electives (Y/N)	Graduate only course (Y/N)	Course Sub. (Y/N)
Required Courses	ENGR 8950	1	Graduate Seminar			Y	
	GRSC 7001	1	GradFIRST Seminar (UGA required)				
Civil/Envr Area of Emphasis (9 credit hours)							
Elective Graduate only (12 credit hours)							
Research Courses	ENGR 7000	6	Master's Research	List Semesters and Credit Hours:			
	ENGR 7010		Project-Focused Master's Research	List Semesters and Credit Hours:			
	ENGR 7300	3	Thesis Preparation and Writing	List Semesters and Credit Hours:			
Total Credit Hours			Notes: <ol style="list-style-type: none"> A minimum of 24 semester hours of coursework, which must include: <ul style="list-style-type: none"> 23 hours of graduate-level coursework, including <ul style="list-style-type: none"> 9 hours selected from one of the Civil Engineering or Environmental Engineering Emphasis course lists. 12 hours from UGA courses open only to graduate students and exclusive of thesis (ENGR 7300, Master's Thesis) and research (ENGR 7000, Master's Research, ENGR 7010, Project-Focused Masters Research) 				

	<ul style="list-style-type: none"> • 1 hour of ENGR 8950, Graduate Seminar* (Only up to 3 hours of ENGR 8950* may apply on the Program of Study) <p>2. A minimum of 6 hours of master's research (ENGR 7000, Master's Research) or project-based research (ENGR 7010, Project-Focused Masters Research). A typical student's research hours will exceed this minimum; however, at most 6 hours of ENGR 7000 or ENGR 7010 may be listed on the program of study.</p> <p>3. 3 hours of thesis preparation and writing (ENGR 7300, Master's Thesis)</p> <p>If you need course substitution, please complete and attach course substitution form. Course substitute form can be found at: https://engineering.uga.edu/students/graduate/ms-milestones-and-forms/</p>
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Comments:

Major Professor (sign and date): _____ Date

ECAM (Civil, Env) Graduate Coordinator (sign and date): _____ Date

UGA CENGR M.S. in Civil and Environmental Engineering

CIVIL ENGINEERING EMPAHSIS COURSE LIST

Structural and Geotechnical Engineering

- CVLE 6330 Advanced Structural Analysis
- CVLE 6340 Design of Bridges
- CVLE(MCHE)(LAND) 6660 Sustainable Building Design
- CVLE(MCHE) 8350 Nonlinear Finite Element Analysis*
- CVLE 8390 Earthquake Engineering and Dynamics of Structures*
- CVLE 8420 Geomechanics*
- CVLE 8460 Soil Improvement*
- CVLE 8510 Advanced Concrete Materials*
- CVLE 8550 Design of Prestressed Concrete Structures*
- CVLE(MCHE) 8640 Advanced Strength of Materials *
- ENGR 6350 Introduction to Finite Element Analysis
- ENGR 8103 Computational Engineering: Fundamentals, Elliptic, and Parabolic Differential Equations
- MCHE 4650/6650 HVAC Systems for Buildings and Industry
- MCHE 8380 Continuum Mechanics
- STAT 6315 Statistical Methods for Researchers

Transportation and Pavement Engineering

- CVLE 4210/6210 Transportation Engineering
- CVLE 4220/6220 Highway Design and Traffic Safety
- CVLE 4470/6470 Pavement Design
- CVLE 8410 Inelastic Behavior of Construction Materials*
- CVLE 8470 Advanced Pavement System Design*
- ENGR 8990 Statistical Learning and Data Mining in Engineering
- ENGR 8990 Deep Learning & Engineering Applications*

EMPHASIS IN ENVIRONMENTAL ENGINEERING

Energy Systems

- ENGR 6490 Renewable Energy Engineering
- ENGR 8103 Computational Engineering
- ENVE 6230 Energy in Nature Civilization and Engineering
- ENVE 6250 Energy Systems and the Environment
- ENVE 6530 Energy and Environmental Policy Analysis
- ENVE 8110 Ecological Energetics
- MIST 6550 Energy Informatics

Environment and Water

- BCHE(ENVE) 6490 Environmental Engineering Remediation Design
- CRSS(GEOL) 8710 Watershed-Scale Modeling

- CVLE(MCHE)(LAND) 6660 Sustainable Building Design
- CVLE 8110 Environmental River Mechanics
- CVLE 8130 Mechanics of Jets and Plumes
- CVLE 8140 Transport and Mixing in Natural Flows
- CVLE(MCHE) 8160 Advanced Fluid Mechanics
- ENGR 8103 Computational Engineering: Fundamentals, Elliptic, and Parabolic Differential Equations (1 hour)
- ENGR 8220 Microfluidic Transport Phenomena
- ENVE 6430 Advanced Open Channel Design
- ENVE 6435 Natural Resources Engineering
- ENVE 6440 Computer Modeling in Water Resources
- ENVE 6450 Engineering Hydrology and Hydraulics
- ENVE 6460 Groundwater Hydrology for Engineers
- ENVE 6470 Environmental Engineering Unit Operations
- ENVE 6550 Environmental Life Cycle Analysis
- GEOL(WASR) 8740 Hydrologic Flow and Transport Modeling
- MCHE 6590 Fluid Mechanics II
- STAT 6315 Statistical Methods for Researchers (4 hours)
- WASR 8200 Hillslope Hydrology Seminar

Sustainable Coastal Engineering

- CVLE 8130 Mechanics of Jets and Plumes
- CVLE 8140 Transport and Mixing in Natural Flows
- CVLE(MCHE) 8160 Advanced Fluid Mechanics
- ENGR 8103 Computational Engineering: Fundamentals, Elliptic, and Parabolic Differential equations
- ENGR 8220 Microfluidic Transport Phenomena
- ENVE 6435 Natural Resources Engineering
- MARS 8030 General Physical Oceanography
- MARS 8100 Estuarine and Coastal Oceanography
- MARS 7380 Quantitative Methods in Marine Science
- MARS 8150 Ocean Waves
- MARS 8510 Modeling Marine Systems
- MCHE 6590 Fluid Mechanics II

Note: * indicates the course is taught less than "every academic year"