



University of New Hampshire
Civil and Environmental Engineering

Doctor of Philosophy: *GEOTECHNICAL ENGINEERING FOCUS*

Student: _____ Advisor: _____

Prerequisites: Accredited BSCE or bachelor's plus the following: Calc. I & II, Diff. Eqs., Statics, Strength of Materials, Civil Materials, Fluid Mechanics, Soil Mechanics, Foundation Design, and Structural Analysis.

Coursework: Students must complete 42 credits or more of coursework beyond Bachelor's degree including Core Courses and Electives (of 3 credits or more each), each with a grade of B- or better. If the student starts PhD with Master's degree, 12 credits or more of course work beyond Master's degree is required. A maximum of 3-4 credits of CEE 895 are allowed unless otherwise approved by the student's committee. The student's faculty advisor must give prior approval of all elective courses selected. 2 courses (up to 8 credits) from the accelerated Master's program can be counted.

If joining with Bachelor's degree, at least 24 credits out of the minimum 42 must be Geotechnical Electives and if joining with Master's degree at least 9 credits of the minimum 12 credits must be Geotechnical Electives; except if waived by the Geotechnical Engineering Faculty committee.

PhD students should coordinate with their advisor (and the guidance committee is formed) on the selection of the required courses.

CURRICULUM WORKSHEET

	Course # and Name	Credits	Sem.	Grade
CEE Geotechnical Elective				
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CEE Geotechnical Elective				
CEE Geotechnical Elective				
CEE Geotechnical Elective				
CEE Geotechnical Elective				
CEE Geotechnical Elective				
Elective				
Elective				
Elective				
Elective				
Elective				
TOTAL				

Qualifying Exam: Following admission into the program, a guidance committee is appointed for the student by the dean of the Graduate School upon recommendation of the advisor and graduate coordinator. This committee that includes the CEE Geotechnical Faculty and optionally other members (up to two additional members) will assist in outlining the student's course of study and may specify individual coursework requirements. The guidance committee administers the qualifying examination. The Geotechnical Engineering Group at UNH will coordinate written and oral qualifying exam once a semester at a certain pre-announced time. After the announcement, the students who are interested in taking the qualifying exam will email the exam coordinator expressing their interest. The student must pass a qualifying exam that includes both a written and an oral component. The content of the qualifying exam will be determined at the discretion of the guidance committee and will be based on the coursework (both graduate and undergraduate) completed to date. The qualifying exam is pass/fail. At the discretion of the guidance committee a student may conditionally pass the exam and be reevaluated after a specified time period.



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The qualifying exam must be completed within 18 months of admission for students that have a master's degree and within 30 months of admission for students that enter the PhD program with only a bachelor's degree.

Dissertation Proposal: Consulting with the research advisor, a doctoral committee will be formed after admission to the program according to the graduate school guidelines. After passing the qualifying exam, the student defends their dissertation research proposal. The doctoral committee reviews research, reviews the student's progress, supervises and approves the doctoral dissertation, and administers the proposal and final examination (also known as the dissertation proposal and defense). The student must present and defend a research proposal no later than one year prior to the dissertation defense.

Advancing to Candidacy: Upon successful completion of the Ph.D. qualifying examination and proposal defense, a doctoral student is advanced to the status of doctoral candidate. The candidacy form must be completed, signed by the doctoral committee members, and submitted to the CEE graduate coordinator.

Professional Outreach Experience: A minimum of one semester as a teaching assistant or comparable experience, or preparation and submission of article(s) to refereed journal(s), or presentations at professional meetings is required. The guidance committee will evaluate whether a student's past teaching assistantship satisfies this requirement.

Degree Completion: Upon completion of the dissertation, and with the approval of the doctoral committee, the student schedules an oral defense in accordance with the requirements of the Graduate School. For graduation, a B average (3.00 GPA) and successful dissertation defense must be achieved.

RECOMMENDED ELECTIVE LISTS

CEE Geotechnical Electives	Suggested non-Geotechnical Electives
CEE 865-Engineering Behavior of Soils	CEE 820-Solid and Hazardous Waste Engineering
CEE 866-Geotechnical Earthquake Engineering	CEE 832-Solid and Hazardous Waste Design
CEE 867-Geological Engineering	CEE 881-Dynamics of Structures
CEE 868-Geo-Environmental Engineering	ESCI 810-Ground Water Hydrology
CEE 879-Foundation Design II	ESCI 834-Applied Geophysics
CEE 966-Geotechnical Modeling	ME 886-Finite Element Analysis
CEE 967-In Situ Geotechnical Testing	ME 922-Continuum Mechanics
CEE 968-Soil-Structure Interaction	ME 926-Theory of Elasticity
CEE 896- Special Topics; Marine Geotech	ME 927-Theory of Plasticity
CEE 995- Problems; Comp. ML	ECE 814-Introduction to Digital Signal Processing
	MATH 835-Stats for Researchers
	MATH 840-Experimental Design
	MATH 845-Applied Math
	MATH 853-Numerical Methods
	MATH 855-Prob. & Stochastic Proc.

*Other courses in CEPS are allowed with written approval by thesis committee.