

CEE 966 – Geotechnical Modeling

Course Syllabus, Fall 2019

General Information:

- Time and Location: MWF 10:10-11:00 AM; GREGG 110
Recorded Lectures will be uploaded on <http://mycourses.unh.edu>
Labs: TBD
- Instructor: Dr. Majid Ghayoomi, Kingsbury W175, majid.ghayoomi@unh.edu
Office Hours: By appointment
Email your questions or make an appointment for the other times.
- Course Website: Blackboard (<http://mycourses.unh.edu>): You can login using your Username and password.
- References: ***No Textbook is required; Handout and Reference Articles will be posted on Blackboard. Additional References are:***

- *Geotechnical Modelling, David Muir Wood, Spon Press, 2004.*
- *Soil Behavior and Critical State Soil Mechanics, David Muir Wood, Cambridge University Press*
- *Advanced Geotechnical Engineering, Desai and Zaman, CRC Press 2013.*
- *Critical State Soil Mechanics, Schofield and Wroth, Cambridge University Lectures, 1968.*
- *Structural Modeling and Experimental Techniques, Harris and Sabnis, CRC Press, 1999*

Other references are also available in the library

Course Description: Introduction to geotechnical modeling, soil constitutive modeling, introduction to numerical modeling and applications, physical modeling, centrifuge modeling, theoretical modeling, and empirical models. Prereq: CEE 665 and 778; or equiv. or permission. 4cr.

Topics:

1. Introduction to modeling
2. Characteristics of Soil Behavior
3. Constitutive modeling
4. Numerical modeling
5. Physical modeling
6. Centrifuge modeling
7. Theoretical modeling

Student Evaluations:

Exams: CEE966 will have two exams; one midterm and one final.

Homework: There will be approximately eight homework assignments over the semester.

Lab: There will be lab sessions, tutorials, and demonstrations.

Project: There will be a research project in which you model a geotechnical system.

Grade Summary:

<u>Item</u>	<u>Number</u>	<u>Percent of Final Grade</u>
Homework and Labs	8-10	30%
Midterm Exam	1	25%
Final Exam	1	25%
Project	1	20%

Organization/Neatness of Written Submissions: A significant part of the engineering is written documents. Heavy emphasis will be placed on clarity, organization, and readability of your work.

Academic Honesty: University of New Hampshire students abide by the Academic Honesty Code.

Accommodations: If you qualify for accommodations because of a disability please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed.

Exam Dates: Following dates are suggested for the exams based on the class schedule.

Midterm Exam 1: TBD

Final Exam: Date, Time, and Location to be announced