

## CIE-598, Advanced soil testing and characterization

### Instructor information

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Office hours	TBD

### Course description

Credits: 2. Laboratory and in-situ testing is a critical and necessary activity in geotechnical engineering. This course covers advanced topics about soil laboratory and in-situ tests used to evaluate soil behavior under various loading and environmental conditions. To begin, the course discusses the fundamentals of sampling, disturbance, and uncertainty in soil parameters. Following that, students will learn about the various laboratory tests through group practice sessions in which they will prepare, test, and report the results of various experiments to get consolidation and shear strength data. Similarly, advanced issues about in-situ testing are covered in this course. Finally, the course discusses how to calibrate constitutive models using the results of the tests learned in this course.

### Course information

Location	TBD
Day and time	Monday, Wednesday, and Friday. Time TBD.
Prerequisite	CIE-660

### Course delivery method

This is an in-person, synchronous course.

### Digital services, hardware, software

Brightspace will be used as a learning management system for the course. All class handouts, homework, quizzes, grades, and communications will be hosted there. In addition to Brightspace, students will often be required to program or produce spreadsheets, for which they can choose their preferred programming language or spreadsheet program.

### Instructional Materials

There is not a unique literature reference for this course. Instead, I will distribute the needed manuscripts you will require through Brightspace. However, the following books are beneficial to understand the