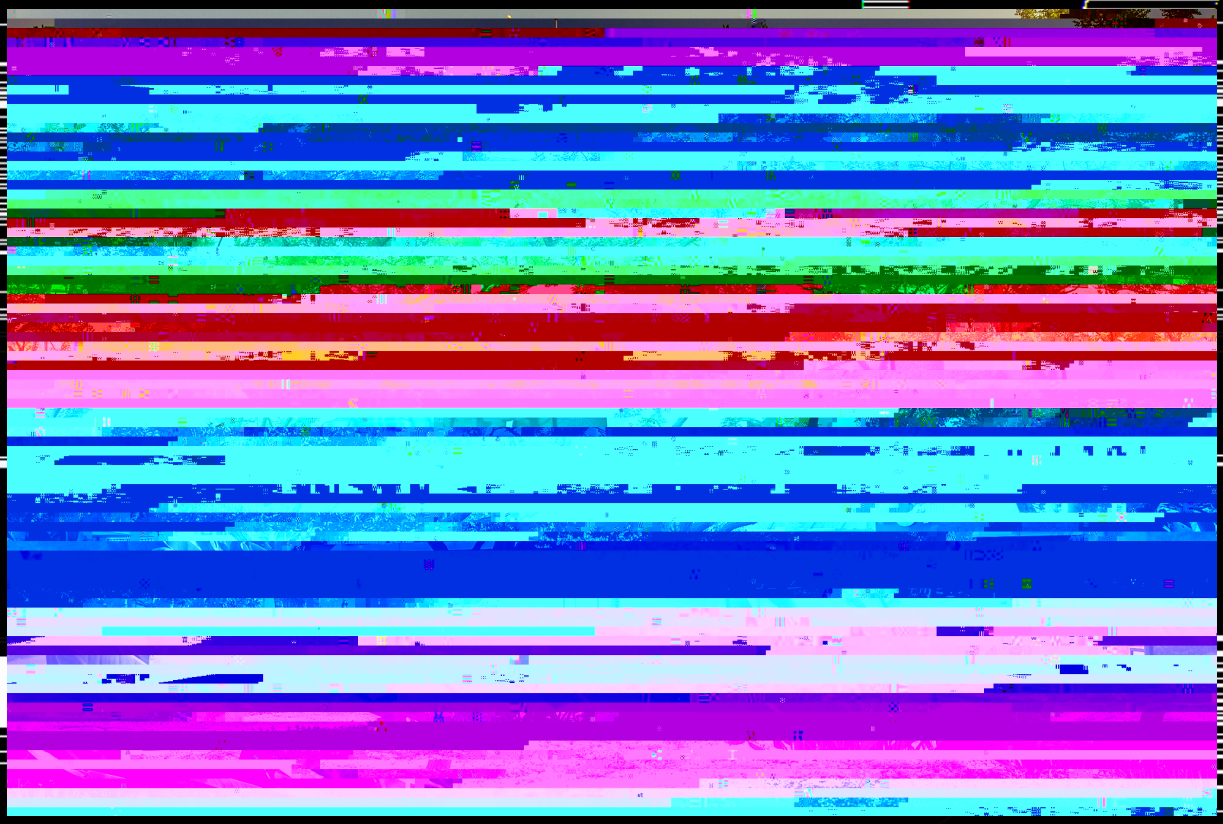
CVEN9512

Geomechanics

Term 1, 2022



Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Nasser Khalili	n.khalili@unsw.edu.au	Open door policy	Room 513 - Civil Engineering Building	(02) 9385 5074

School Contact Information

Engineering Student Support Services – The Nucleus - enrolment, progression checks, clash requests, course issues or program-related queries

Engineering Industrial Training – Industrial training questions

UNSW Study Abroad – study abroad student enquiries (for inbound students)

UNSW Exchange – student exchange enquiries (for inbound students)

UNSW Future Students – potential student enquiries e.g. admissions, fees, programs, credit transfer

Phone

(+61 2) 9385 8500 – Nucleus Student Hub

(+61 2) 9385 7661 – Engineering Industrial Training

(+61 2) 9385 3179 – UNSW Study Abroad and UNSW Exchange (for inbound students)

Course Details

Units of Credit 6

Summary of the Course

Fundamentals of the effective stress concept, seepage analysis and Laplace Equation, basic and advanced theories of consolidation, nonlinearity and Biots theorem, soil liquefaction, seismic analysis of embankment dams, critical state soil mechanics, fundamentals of continuum mechanics, theory of elasticity, constitutive relationships and failure criteria for real soils, soil plasticity and Cam-clay model, fundamentals of unsaturated soils mechanics

Course Aims

Assessment

Assessment task	Weight	Due Date	Course Learning Outcomes Assessed
1. Final Exam	50%	Not Applicable	1, 2, 3, 4, 5
2. Tutorials	50%	Two weeks before the scheduled date for the final exam.	1, 2, 3, 4, 5, 6

Assessment 1: Final Exam

Assessment length: 2 hrs
Submission notes: The final exam is OPEN BOOK.

The final examination is included as the course leaning outcomes include a significant level of technical learning that can be effectively and objectively assessed in an exam environment. The examination is designed to align with the learning outcomes and competencies derived from the course. The final examination is open book and is of two-hour duration.

Assessment criteria

The exam will be assessed on the basis of technical accuracy of calculations and evidence of good understanding of fundamental concepts with assumptions and problem simplification. The exam will cover all aspects of the material covered in the course.

Assessment 2: Tutorials

Submission notes: The hand-in tutorials are due two weeks before the scheduled date for the final exam. A penalty of 5% will apply for each day of late submission. Tutorials handed in more than 5 days late will not be considered in the assessment.
Due date: Two weeks before the scheduled date for the final exam.
Marks returned: The hand-in tutorial marks will be returned one week before the scheduled date for the final exam.

There will be a total of eight (8) assignments. All hand-in assignments will be marked and returned to students. The aim is to provide feedback on the correctness of the approaches and the solutions presented, and re-enforce independent learning.

Assessment criteria

The hand-in tutorials are a core component of the 1 ‰

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Submission of Assessment Tasks

Please refer to the Moodle page of the course for further guidance on assessment submission.

UNSW has a standard late submission penalty of:

- 5% per day, for all assessments where a penalty applies, capped at five days (120 hours), after which a student cannot submit an assessment, and no permitted variation.

Academic Honesty and Plagiarism

Beware! An assignment that includes plagiarised material will receive a 0% Fail, and students who plagiarise may fail the course. Students who plagiarise are also liable to disciplinary action, including exclusion from enrolment.

Plagiarism is the use of another person’s work or ideas as if they were your own. When it is necessary or desirable to use other people’s material you should adequately acknowledge whose words or ideas they

Academic Information

Final Examinations:

Final exams in T1 2022 will be held online between 29th April - 12th May inclusive, and supplementary exams between 23rd - 27th May inclusive. You are required to be available on these dates. Please do not to make any personal or travel arrangements during this period.

ACADEMIC ADVICE

- Key Staff to Contact for Academic Advice (log in with your zID and password): https://intranet.civeng.unsw.edu.au/key-staff-to-contact-during-your-studies-at-unsw
- Key UNSW Dates - eg. Census Date, exam dates, last day to drop a course without academic/financial liability etc.
- CVEN Student Intranet (log in with your zID and password): https://intranet.civeng.unsw.edu.au/student-intranet
- Student Life at CVEN, including Student Societies: https://www.unsw.edu.au/engineering/civil-and-environmental-engineering/student-life
- Special Consideration: https://student.unsw.edu.au/special-consideration