UNSW Course Outline

CVEN4102 Operations and Projects - 2024

Published on the 11 Feb 2024

General Course Information

Course Code : CVEN4102
Year : 2024
Term : Term 1
Teaching Period : T1
Is a multi-term course? : No
Faculty : Faculty of Engineering
Academic Unit : School of Civil and Environmental Engineering
Delivery Mode : In Person
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Postgraduate, Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

Most engineering work fits within what is broadly referred to as operations and projects. For example an earthmoving operation may involve trucks cycling between an excavator and some dump point; an engineering project may involve the design, construction and commissioning of

infrastructure. Operations tend to be ongoing but can be time limited, while projects have a defined time frame. The course will cover issues to do with resources (materials, equipment, people), cost and time in engineering operations and on engineering projects. Examples will be chosen to highlight efficient practices and methods adopted in engineering operations and on engineering projects.

Course Aims

The aim of this course is to introduce students to problem solving as a discipline

Relationship to Other Courses

Pre-requisites for Undergraduate students: CVEN2101 Engineering Construction; and CVEN3101 Engineering Operations and Control.

Excluded Course for Postgraduate students: CVEN9723 Design of Construction Operatioins.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Explain the process of construction operations
CLO2 : Work independently on the design a permanent or temporary structure
CLO3 : Select a suitable method for constructing underground tunnels.
CLO4 : Work effectively in teams for group assignments.

Course Learning Outcomes	Assessment Item
CLO1 : Explain the process of construction operations	• Group Assignment • Quiz • Final Exam
CLO2 : Work independently on the design a permanent or temporary structure	• Group Assignment • Quiz • Final Exam
CLO3 : Select a suitable method for constructing underground tunnels.	• Group Assignment • Quiz • Final Exam
CLO4 : Work effectively in teams for group assignments.	• Group Assignment • Quiz • Final Exam

Learning and Teaching Technologies

Moodle - Learning Management System | Blackboard Collaborate

Additional Course Information

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Group Assignment	20%	Start Date: 01/03/2024 12:00 PM Due Date: 14/04/2024 11:50 PM Post Date: 25/04/2024 05:00 AM
Quiz	20%	Start Date: 14/03/2024 11:30 AM Due Date: 14/03/2024 12:30 PM Post Date: 28/03/2024 05:00 PM
Final Exam	60%	

Assessment Details

Group Assignment

Assessment Overview

Engineering design is generally a team-based activity. The group assignment will help students to learn how to work effectively in a team-based environment. Each group can be up to 4 students. Detailed descriptions of the group assignments will be provided in Moodle.

Course Learning Outcomes

- CLO1 : Explain the process of construction operations
- CLO2 : Work independently on the design a permanent or temporary structure
- CLO3 : Select a suitable method for constructing underground tunnels.
- CLO4 : Work effectively in teams for group assignments.

Assessment Length

6 weeks

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

Quiz

Assessment Overview

The quizzes will assess the basic knowledge covered in the main topics of the course. Students who perform poorly in the quizzes will have a chance to discuss progress with the lecturer during the semester. The quizzes will be of half an hour duration and will be closed book. It consists of both quantitative and theoretical questions.

Course Learning Outcomes

- CLO1 : Explain the process of construction operations
- CLO2 : Work independently on the design a permanent or temporary structure
- CLO3 : Select a suitable method for constructing underground tunnels.
- CLO4 : Work effectively in teams for group assignments.

Assessment Length

1 hour

Assignment submission Turnitin type

This is not a Turnitin assignment

Final Exam

Assessment Overview

The final exam provides an opportunity to assess higher capabilities in understanding and applying the knowledge learned throughout the semester. It will be of two hours duration in the formal exam period and will be closed book.

Course Learning Outcomes

- CLO1 : Explain the process of construction operations
- CLO2 : Work independently on the design a permanent or temporary structure
- CLO3 : Select a suitable method for constructing underground tunnels.
- CLO4 : Work effectively in teams for group assignments.

Assignment submission Turnitin type

Not Applicable

Hurdle rules

A mark of at least 40% in the final examination is required before the class work is included in the final mark.

General Assessment Information

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 12 February - 18 February	Lecture	Dewatering
	Workshop	Dewatering
Week 2 : 19 February - 25 February	Lecture	Shoring
	Workshop	Shoring
Week 3 : 26 February - 3 March	Lecture	Bracing
	Workshop	Bracing
Week 4 : 4 March - 10 March	Lecture	Concrete Formwork
	Workshop	Concrete Formwork
Week 5 : 11 March - 17 March	Lecture	Piling
	Assessment	Quiz
Week 7 : 25 March - 31 March	Lecture	Lifting
	Workshop	Lifting
Week 8 : 1 April - 7 April	Lecture	Tunnelling
	Workshop	Tunnelling
Week 9 : 8 April - 14 April	Lecture	TBM Tunnelling
	Assessment	Group Assignment
Week 10 : 15 April - 21 April	Lecture	Trenchless Techniques

Attendance Requirements

For undergraduate courses with Workshops and/or Labs, attendance for those classes is a necessary part of the course. You must attend at least 80% of the workshop/lab in which you are enrolled for the duration of the sessions.

General Schedule Information

Lectures: Tue 10:00 - 13:00 (Weeks:1-5,7-10), Ritchie Theatre (K-G19-LG02)

Workshops: Thu 11:00 - 13:00 (Weeks:1-5,7-10), Ritchie Theatre (K-G19-LG02)

Week 6: Flexibility week for all courses (non-teaching)

Course Resources

Prescribed Resources

There is no prescribed textbook for this course.

Recommended Resources

There are numerous books in the library covering Construction Methods and Project Management. If you are having trouble following the lectures or understanding how a construction process works then it is recommended that you look at one of these.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	A/Prof X Shen		Civil Engineering Building (H20) Level 2, Room 212 Kensington Campus	+61 2 9385 0483	Available during lectures and consultation sessions, or Email to make appointment on any urgent or personal matters	No	Yes

Other Useful Information

Academic Information

I. Special consideration and supplementary assessment

If you have experienced an illness or misadventure beyond your control that will interfere with your assessment performance, you are eligible to apply for Special Consideration prior to, or within 3 working days of, submitting an assessment or sitting an exam.

Please note that UNSW has a Fit to Sit rule, which means that if you sit an exam, you are declaring yourself fit enough to do so and cannot later apply for Special Consideration.

For details of applying for Special Consideration and conditions for the award of supplementary assessment, please see the information on UNSW's Special Consideration page.

II. Administrative matters and links

All students are expected to read and be familiar with UNSW guidelines and polices. In particular, students should be familiar with the following:

- Attendance
- UNSW Email Address
- Special Consideration
- Exams
- Approved Calculators

- Academic Honesty and Plagiarism
- Equitable Learning Services

III. Equity and diversity

Those students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the course convener prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equitable Learning Services. Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made.

IV. Professional Outcomes and Program Design

Students are able to review the relevant professional outcomes and program designs for their streams by going to the following link: https://www.unsw.edu.au/engineering/student-life/student-resources/program-design.

Note: This course outline sets out the description of classes at the date the Course Outline is published. The nature of classes may change during the Term after the Course Outline is published. Moodle or your primary learning management system (LMS) should be consulted for the up-to-date class descriptions. If there is any inconsistency in the description of activities between the University timetable and the Course Outline/Moodle/LMS, the description in the Course Outline/Moodle/LMS applies.

Academic Honesty and Plagarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW students have a responsibility to adhere to this principle of academic integrity. Plagiarism undermines academic integrity and is not tolerated at UNSW. *Plagiarism at UNSW is defined as using the words or ideas of others and passing them off as your own.*

Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. UNSW has produced a website with a wealth of resources to support students to understand and avoid plagiarism, visit: student.unsw.edu.au/plagiarism. The Learning Centre assists students with understanding academic integrity and how not to plagiarise. They also hold workshops and can help students one-on-one.

You are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and the proper referencing of sources in preparing all assessment tasks.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an honours thesis or contract cheating) even suspension from the university. The Student Misconduct Procedures are available here:

www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

Submission of Assessment Tasks

Work submitted late without an approved extension by the course coordinator or delegated authority is subject to a late penalty of five percent (5%) of the maximum mark possible for that assessment item, per calendar day.

The late penalty is applied per calendar day (including weekends and public holidays) that the assessment is overdue. There is no pro-rata of the late penalty for submissions made part way through a day. This is for all assessments where a penalty applies.

Work submitted after five days (120 hours) will not be accepted and a mark of zero will be awarded for that assessment item.

For some assessment items, a late penalty may not be appropriate. These will be clearly indicated in the course outline, and such assessments will receive a mark of zero if not completed by the specified date. Examples include:

- Weekly online tests or laboratory work worth a small proportion of the subject mark;
- Exams, peer feedback and team evaluation surveys;
- Online quizzes where answers are released to students on completion;
- Professional assessment tasks, where the intention is to create an authentic assessment that has an absolute submission date; and,
- Pass/Fail assessment tasks.

Faculty-specific 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)

School-specific Information

Final Examinations

Final Exams in T1 2024 will be held on campus between the 26th April and 9th May, and Supplementary Exams between the 20th - 24th May 2024. You are required to be available on these dates. Please do not to make any personal or travel arrangements during this period.

School Contact Information

For assistance with enrolment, class registration, progression checks and other administrative matters, please see the Nucleus: Student Hub. They are located inside the Library – first right as you enter the main library entrance. You can also contact them via http://unsw.to/webforms or reserve a place in the face-to-face queue using the UniVerse app.

For course administration matters, please contact the Course Coordinator.

Questions about this course should normally be asked during the scheduled class so that everyone can benefit from the answer and discussion.