

# CVEN4050, CVEN4051, CVEN9051

Thesis B

Term 2, 2022



## Course Overview

### Staff Contact Details

#### Convenors

Name	Email	Availability	Location	Phone
Robert Holdom	<a href="mailto:robert.holdom@unsw.edu.au">robert.holdom@unsw.edu.au</a>	email or office contact by phone or in person	CE 211	02 9385 7773

### 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

This course is the second of two parts and is undertaken after the completion of CVEN4050 Thesis A. The Thesis involves formulating the designs for and solution to open-ended civil and/or environmental engineering problems. The problems will be drawn from industry and will be multi-disciplinary involving application of material learnt throughout the undergraduate program and will require creative thought. The course will include the preparation of relevant professional documents. Part B involves the satisfactory preparation and submission of an individual thesis addressing the project plan defined in Thesis A.

### Course Aims

This course enhances the student's skills for undertaking scholarly enquiry by attempting to achieve a specific topic objective within a defined period of time. A significant component of the course relates to the review of literature, which promotes independent and reflective learning as well as increases students' capacity to develop information literacy. The thesis is expected to reinforce the student's ability and confidence in the written communication of technical information.

### Course Learning Outcomes

After successfully completing this course, you should be able to:

Learning Outcome	EA Stage 1 Competencies
1. Undertake and execute a research project	PE1.1, PE1.3, PE2.2, PE2.4, PE3.1
2. Conduct a thorough literature review	PE1.1
3. Satisfaction of intellectual curiosity and contribution of original ideas and research	PE3.3
4. Development of transferable skills in the process of developing and crafting a feasible research project	PE1.4
5. Produce a self-contained technical report	PE3.2
6. Development of oral and written communication skills	PE3.2
7. Present the research in a seminar	PE3.2
8. Demonstrate an ability to work to produce designs which draw upon knowledge gained in the undergraduate program.	PE2.1, PE2.4
9. Be in a position to make a positive contribution to the workforce as a professional engineer.	PE3.1, PE3.2, PE3.3, PE3.5
10. Critically evaluate information and demonstrate deep	PE1.1, PE1.2

Learning Outcome	EA Stage 1 Competencies
engineering understanding of the given design project.	

On completion of this thesis course be able to liaise and work with other professions in providing technical engineering advice for communication purposes to non-engineering trained persons, as part of a multi-discipline project team.

### Teaching Strategies

selected topics are related to industry projects selected from contemporary practice. The work involves investigations and design applications.

## Assessment

Assessment task	Weight	Due Date	Course Learning Outcomes Assessed
1. Topic Nomination and Thesis Plan	5%	16/06/2022 05:00 PM	3, 10
2. Literature Review	20%	30/06/2022 05:00 PM	1, 2, 3, 6
3. In-class Presentation	20%	10/07/2022 05:00 PM	6, 7, 9
4. Thesis Document	50%	04/08/2022 05:00 PM	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
5. Abstract	5%	04/08/2022 05:00 PM	3, 6, 9, 10

### Assessment 1: Topic Nomination and Thesis Plan

**Assessment length:** 2 pages

**Submission notes:** There is no strict format issued for this submission.

**Due date:** 16/06/2022 05:00 PM

**Deadline for absolute fail:** The submission deadline is an absolute deadline. No extensions.

**Marks returned:** Awarded on making a timely submission.

The requirement is an individual submission that does not exceed a two-page outline providing:

1. A succinct title of your Thesis topic;
2. A description of the things you are to do across the term in investigation and reporting upon your thesis topic;
3. A Thesis Plan timeline outlining your Thesis program progress across Term 2, 2022 which incorporates your weekly progress and how you intend to meet the submission deadline for your Assessment Tasks of the course.

#### Assessment criteria

In successfully making a timely submission of Assessment Task 1, you will receive the

5 marks allocated to Assessment Task 1. This will be the allocated marks for each student before the term Census Date. Late submissions shall be accepted but will record a zero mark for this Assessment Task.

If a student decides to change topics after the submission deadline has passed, they are able to do so but the 5 marks allocated for the first topic submission shall be deducted and a zero mark will be recorded. The intent here is for a student to do sufficient background reading before they nominate their topic so as not to waste productive time.

#### Hurdle requirement

Must complete Assessment Task.

### Assessment 2: Literature Review

**Assessment length:** 5 pages plus the format submission requirements outlined in Assessment Task 2.  
**Submission notes:** Submit as a single pdf in accordance with the Assessment Task 2 outline.  
**Due date:** 30/06/2022 05:00 PM  
**Deadline for absolute fail:** The submission deadline is an absolute deadline. No extensions.  
**Marks returned:** Within 2 weeks

Having been given approval for their topic selection in Assessment Task 1, each student is required to complete a (limited) literature search about the technical aspects associated with their topic with their Demonstrator, and how they might investigate it.

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

### **Assessment criteria**

The following elements will be graded for the Assessment Task 2 submission:

1. Extent of the Literature Search (amount and width of your search): 25%
2. The write-up of the Literature Review in terms of its grammar, formatting and referencing: 25%
3. The development of the student's argument as to why the sources identified in the Literature Search are applicable to the Thesis topic: 50%

### **Hurdle requirement**

Must complete.

## **Assessment 3: In-class Presentation**

**Submission notes:** The submission deadline is for the Part 1 Powerpoint slides.  
**Due date:** 10/07/2022 05:00 PM  
**Deadline for absolute fail:** It is an absolute deadline. No extensions.  
**Marks returned:** During Week 9, after the Week 9 presentations have been made.

Part 1: Each student is required to prepare a 12-slide static Powerpoint presentation to the required format.

Part 2: As agreed with their Demonstrator each student will be required to make a Presentation in their Workshop to their peers. The presentations are scheduled for Week 7, or Week 8, or Week 9.

### **Assessment criteria**

Part1:

As an individual presentation, each student is to prepare a maximum of 12 'Microsoft Power-point' presentation slides (static) that summarises your topic at the end of Week 6. The first slide will be a topic front presentation slide and is to include the student's Name, zID and topic. The second slide should be an outline of the content of the presentation and the last slide should include a summary of key reference sources you have used so far. The presentation for the remaining slides is to contain:

- Topic Outline: 1 mark
- Topic progress according to your project schedule: 1 mark
- Why you picked the topic: 1 mark

- What has been learned (so far): 1 mark
- What remains to be done in finalising the Thesis document and a verbal update on what has happened since you submitted your 'Powerpoint' slides on 10th July, 2022: 1 mark

The quality of the slides preparation will be graded: 5 marks

Part 2:

As agreed with a student's Demonstrator, the student will present their presentation slides in a Workshop session in either: Week 7 or, Week 8 or, Week 9 by way of a 'live' in class or 'live' on-line live presentation of their previously submitted slides. It is expected that the presentation will be completed between 9 minutes and 10 minutes. The 'Power-point' presentation will be graded: 10 marks.

### **Hurdle requirement**

Must complete.

## **Assessment 4: Thesis Document**

**Assessment length:** nominally 25-30 pages following the format specified in the Assessment Task 4.

**Submission notes:** The submission will be made as a single pdf document.

**Due date:** 04/08/2022 05:00 PM

**Deadline for absolute fail:** It is an absolute deadline. No excuses.

**Marks returned:** After the release of Term 2 results.

Complete the Thesis document in accordance with the Assessment Task 4 requirements.

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

### **Assessment criteria**

The Assessment criteria for the Thesis submission is as follows:

Final Report (in '**modified Thesis form**'): 50 marks, with the following breakdown of marks allocated:

1. Executive Summary: 5 marks
2. Written Presentation: 6 marks
3. Background information: 5 marks
4. Quality of Work and Discussion of Results: 24 marks
5. Conclusions and value added: 10 marks

### **Hurdle requirement**

Must complete and be of an acceptable standard.

## **Assessment 5: Abstract**

**Assessment length:** 300 words

**Submission notes:** Submit as a single page pdf containing the student's name and zID details.

**Due date:** 04/08/2022 05:00 PM

**Deadline for absolute fail:** It is an absolute deadline. No excuses.

**Marks returned:** After the release of the Term 2 results.

The 300-word Abstract will be included in the Thesis submission but it will be marked separately and is to be uploaded into a separate portal.

**Assessment criteria**

Completed to the standard required of the issued template.

**Hurdle requirement**

Must complete.



## Attendance Requirements

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

## Course Schedule

Term 2, 2022 – Lecture in CLB 7 or on-line Workshops as indicated in the Moodle

Date	Topic and Lecture Content	Demonstration Content
30/05/2022  (Week 1)	<b>Course Introduction</b>  Introduction to Beaches Link Tunnel  Thesis preparation and Literature Search commencement	Workshop scheduling to be completed in Week 1. Students to commence their search for topic to be discussed with their Demonstrator in their Week 2 Workshop session.  Commence Assessment Task 1
06/06/2022  (Week 2)	Lecture content TBA	Workshop commencement  Finalise Assessment Task 1 Commence Assessment Task 2
13/06/2022  (Week 3)	<b><i>Queen's Birthday Public Holiday on Monday 13th June, 2022. No class.</i></b>	<b>No class.</b> Students to continue with Assessment Task 1 and consult with your Demonstrator using Moodle  Submit Assessment Task 1
20/06/2022  (Week 4)	Lecture content TBA	Continue Assessment Task 2
27/06/2022  (Week 5)	Lecture content TBA	Submit Assessment Task 2  Commence Assessment Tasks 3 and 4
04/07/2022  (Week 6)	<b><i>Flexibility week for all courses (non-teaching)</i></b>  <b><i>No class.</i></b>	<b>No class.</b>
11/07/2022  (Week 7)	Lecture content TBA	All students presentation slides due before Workshop Presentations commence.  Workshop Presentations for Assessment Task 3 commence.  Continue Assessment Task 4
18/07/2022  (Week 8)	Lecture content TBA	Workshop Presentations for Assessment Task 3 continue.

		Continue Assessment Task 4
25/07/2022 (Week 9)	Lecture content TBA	Workshop Presentations for Assessment Task 3 continue.  Continue Assessment Task 4
01/08/2022 (Week 10)	Lecture content TBA  Thesis finalisation guidance and course wrap-up.	Submit Assessment Task 4

[View class timetable](#)

## Timetable

Date	Type	Content
Week 3: 13 June - 17 June	Assessment	Topic Nomination and Thesis Plan: There is no strict format issued for this submission.
Week 5: 27 June - 1 July	Assessment	Literature Review: Submit as a single pdf in accordance with the Assessment Task 2 outline.
Week 10: 1 August - 5 August	Assessment	Thesis Document: The submission will be made as a single pdf document.
	Assessment	Abstract: Submit as a single page pdf containing the student's name and zID details.

## **Resources**

### **Prescribed Resources**

There are no prescribed texts for this thesis course.

### **Recommended Resources**

The lecturer may provide you with prescribed readings for each lecture topic and:

- You are required to conduct your own Literature research in completing this thesis course. This should be discussed with your Demonstrator and the UNSW library staff by making an online inquiry as to how you can undertake independent research and find your resources.
- Additional materials provided on Moodle.
- Recommended Internet sites.

## **Course Evaluation and Development**

For Assessment Task 1 students will receive oral feedback from their Demonstrator.

For the major Assessment Tasks (2 and 4) students will receive a detailed grading of their work and the marks allocated. These submissions will be graded separately by two different people one of which will be the student's Demonstrator.

For Assessment Task 3 the Demonstrator has the responsibility for the awarding of marks and providing the student feedback.

For Assessment Task 5 students will receive only a mark for their submission.

## **Laboratory Workshop Information**

There are no laboratory sessions conducted for this course. Weekly Workshop attendance is a compulsory part of this course and Demonstrators have been instructed to maintain weekly attendance rolls.

## **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 are and where you found them (giving the complete reference details, including page number(s)). The Learning Centre provides further information on what constitutes Plagiarism at:

<https://student.unsw.edu.au/plagiarism>

## Academic Information

### Final Examinations:

Final exams in T2 2022 will be held online between 12th - 25th August 2022 inclusive, and supplementary exams between 5th - 9th September 2022 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>
- General and Program-Specific Questions: [The Nucleus: Student Hub](#)
- Book an Academic Advising session: <https://app.acuityscheduling.com/schedule.php?owner=19024765>

## Disclaimer

*This course outline sets out 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 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 (as updated in Moodle), the description in the Course Outline/Moodle applies.*

## Image Credit

Mike Gal.

## CRICOS

CRICOS Provider Code: 00098G

## Acknowledgement of Country

We acknowledge the Bedegal people who are the traditional custodians of the lands on which UNSW Kensington campus is located.

## Appendix: Engineers Australia (EA) Professional Engineer Competency Standard

Program Intended Learning Outcomes	
Knowledge and skill base	
PE1.1 Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline	✓
PE1.2 Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline	✓
PE1.3 In-depth understanding of specialist bodies of knowledge within the engineering discipline	✓
PE1.4 Discernment of knowledge development and research directions within the engineering discipline	✓
PE1.5 Knowledge of engineering design practice and contextual factors impacting the engineering discipline	
PE1.6 Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline	
Engineering application ability	
PE2.1 Application of established engineering methods to complex engineering problem solving	✓
PE2.2 Fluent application of engineering techniques, tools and resources	✓
PE2.3 Application of systematic engineering synthesis and design processes	
PE2.4 Application of systematic approaches to the conduct and management of engineering projects	✓
Professional and personal attributes	
PE3.1 Ethical conduct and professional accountability	✓
PE3.2 Effective oral and written communication in professional and lay domains	✓
PE3.3 Creative, innovative and pro-active demeanour	✓
PE3.4 Professional use and management of information	
PE3.5 Orderly management of self, and professional conduct	✓
PE3.6 Effective team membership and team leadership	