

School of Civil and Environmental Engineering UNSW Engineering

## **CVEN4051**

Thesis **B** 

Term 1, 2023



## **Course Overview**

#### **Staff Contact Details**

#### Convenors

Name	Email	Availability	Location	Phone
Michael Manefield	manefield@unsw.edu.au	Business hours	Office 109, Vallentine Annex (H22)	040547706 6

#### **School Contact Information**

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

Engineering Industrial Training – Industrial training questions

<u>UNSW Study Abroad</u> – 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. Execute a research project within an assigned theme	PE1.1, PE1.3, PE2.2, PE2.4, PE3.1
2. Conduct a literature review to determine the range of acceptable solutions and/or limitations of those acceptable solutions for a research project	PE1.1
3. Demonstrate critical thinking and research skills and critique industry practices in formulating responses to problems relating to the role of civil and environmental engineers	PE1.1, PE1.2
4. Apply engineering principles, such as risk management, decision making and design in developing solutions to real-world problems that are ethically sound	PE3.1, PE3.2, PE3.3
5. Demonstrate professional level written communication skills and presentation skills	PE3.2

#### **Teaching Strategies**

The Honours Thesis is an individual thesis in which each student works under the guidance of academic staff with input from industry specialists. 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. Thesis Preparation	50%	Not Applicable	2, 3, 4, 5
2. Thesis Document	50%	21/04/2023 05:00 PM	1, 2, 3, 4, 5

#### **Assessment 1: Thesis Preparation**

Assessment tasks designed to assist in thesis preparation.

#### **Assessment 2: Thesis Document**

Due date: 21/04/2023 05:00 PM

Generate an engineering report addressing the assigned task.

## **Attendance Requirements**

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

## **Course Schedule**

#### View class timetable

#### Timetable

Date	Туре	Content	
Week 1: 13 February - 17 February	ek 1: 13 February - Blended Course introduction and c		
Week 2: 20 February - 24 February	Blended	Options assessment and action plans	
Week 3: 27 February - 3 March	Blended	Remediation options assessment case study	
Week 4: 6 March - 10 March	Blended	Remediation action plan case study	
Week 5: 13 March - 17 March	Blended	Stakeholder engagement	
Week 6: 20 March - 24 March			
Week 7: 27 March - 31 March	Workshop	Help session I	
Week 8: 3 April - 7 April	Workshop	Help session II	
Week 9: 10 April - 14 April	Workshop	Help session III	
Week 10: 17 April - 21	Assessment		
April	Assessment	Thesis Document	

## Resources

### **Prescribed Resources**

Refer to Moodle

## **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 T1 2023 will be held on campus between the 28th of April and the11th of May, and Supplementary Exams between the 22nd of May and the 26th of May. 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): <u>https://intranet.civeng.unsw.edu.au/key-staff-to-contact-during-your-studies-at-unsw</u>
- <u>Key UNSW Dates</u> 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): <u>https://intranet.civeng.unsw.edu.au/student-intranet</u>
- Student Life at CVEN, including Student Societies: <u>https://www.unsw.edu.au/engineering/civil-and-environmental-engineering/student-life</u>
- Special Consideration: https://student.unsw.edu.au/special-consideration
- General and Program-Specific Questions: The Nucleus: Student Hub
- Book an Academic Advising session: https://unswengacademicadvising.as.me/schedule.php

## 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				