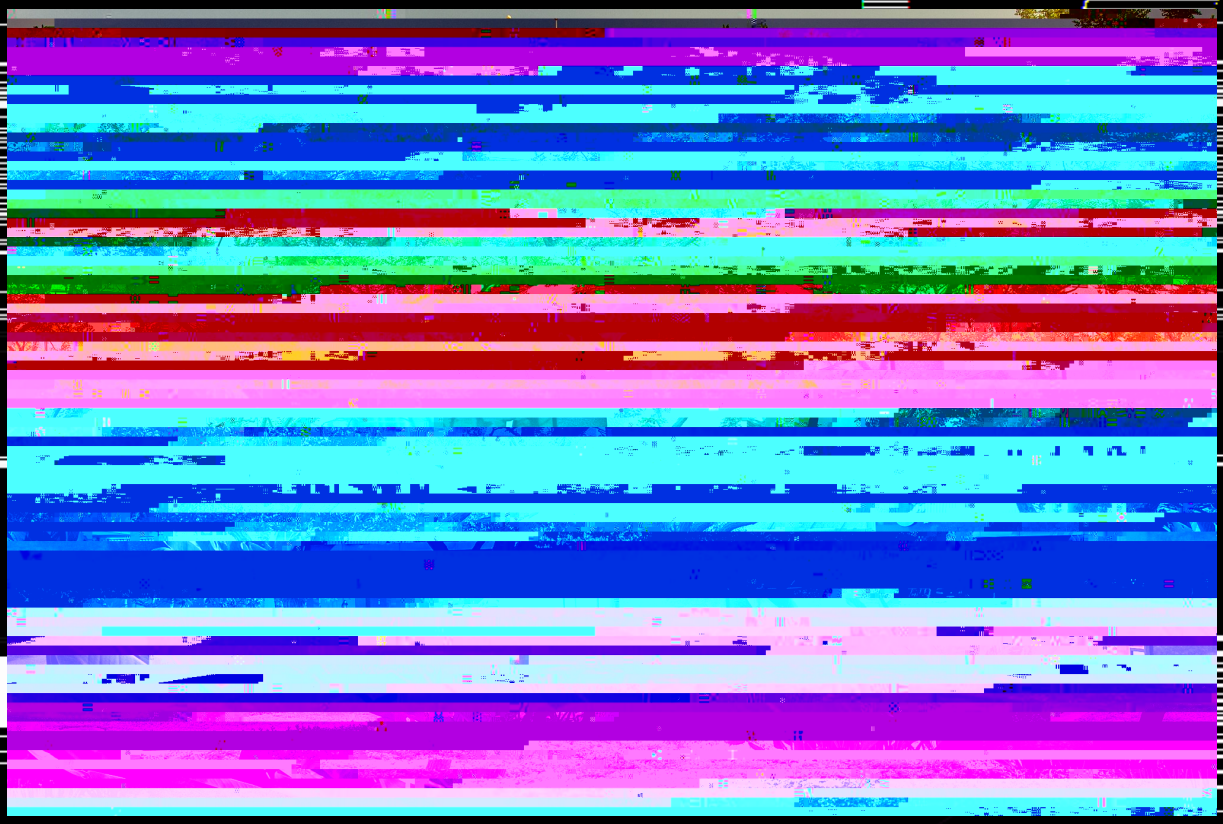
CVEN4051

Thesis B

Term 1, 2022



Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Michael Manefield	manefield@unsw.edu.au	Online	Sydney, Australia	0405477066

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 2 i-di

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

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. Assignment 1	10%	25/02/2022 05:00 PM	1, 3, 4, 6
2. Assignment 2	20%	18/03/2022 05:00 PM	1, 2, 3, 4, 5, 6, 9, 10
3. Presentation	20%	22/04/2022 05:00 PM	1, 2, 3, 4, 6, 7, 8, 9, 10
4. Thesis	50%	19/04/2022 05:00 PM	1, 2, 3, 4, 5, 6, 8, 9, 10

Assessment 1: Assignment 1

Assessment length: 1 page
Due date: 25/02/2022 05:00 PM
Deadline for absolute fail: One week after due date
Marks returned: One week after submission

Present an overview of your approach to assessing remediation options and a gantt chart detailing time management for the term.

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

Assessment criteria

Student submissions will be graded according to the following scheme with equal weight given to the following four categories:

Appropriate: Does the submission adhere to requirements? Has the student understood what was expected of them in this assignment? Is the information presented relevant to the task?

Correct: Will the approach outlined produce a justifiable remediation option recommendation for the client? Is the allocation of time presented in the gantt chart sufficient to undertake the task?

Professional: Is the structure, writing quality and document aesthetic of professional standard? Does the submission give the impression it was prepared by a mature professional engineer?

Engaged: Is there evidence of engagement with the task beyond basic requirements?

Additional details

Your task

This assignment requires you to develop and outline an approach to assessing remediation options for the central organochlorine source zone located in groundwater under the Botany Industrial Park (1/2 page). You are also required to present a gantt chart showing how you will allocate time to the task over the course of the term (1/2 page). Suggested time commitment – 4 hours.

Submission details

Your submission should be no longer than one page in total. No exceptions. There are no specific requirements for structure (besides outline and gantt chart) or word or character count. Submit as a pdf via Turnitin on Moodle by 5 pm Friday of Week 3. Late submissions will be penalised by 10% per day. The deadline for absolute fail (zero grade) is 7 days after the submission deadline. Special consideration requests are to be made via Moodle (not the course coordinator).

Assessment 2: Assignment 2

Assessment length: 3 pages
Due date: 18/03/2022 05:00 PM
Deadline for absolute fail: One week after submission deadline
Marks returned: Two weeks after submission deadline

A short report describing the shortlisting of options for remediation of chlorinated solvents in groundwater.

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

Assessment criteria

Student submissions will be graded according to the following scheme with equal weight given to the following four categories:

Appropriate: Does the submission adhere to requirements? Has the student understood what was expected of them in this assignment? Is the information presented relevant to the task?

Correct: Is the information presented factually correct or accurate? Does the content of the submission reflect reality?

Professional: Is the structure, writing quality and document aesthetic of professional standard? Does the submission give the impression it was prepared by a mature professional engineer?

Engaged: Is there evidence of engagement with the task beyond basic requirements? How deeply has the student investigated resources available to produce the submission?

Additional details

Your task

This assignment requires you to write a report describing the process used to shortlist 2-5 remediation options for managing the central organohalide source area in groundwater under the Botany Industrial Park. A shortlist to be examined in detail in your final thesis submission must be presented. The process used for selecting the shortlist must be transparent and justified. Suggested time commitment – 12 hours.

Submission details

Your submission should be no longer than three pages, including figures but excluding title page, references or appendices. There are no specific requirements for structure or word or character count. Submit as a pdf via Turnitin on Moodle by 5 pm Friday of Week 5. Late submissions will be penalised by 10% per day. The deadline for absolute fail (zero grade) is 7 days after the submission deadline. Special

consideration requests are to be made via Moodle (not the course coordinator).

Assessment 3: Presentation

Assessment length: 5 minutes
Due date: 22/04/2022 05:00 PM
Deadline for absolute fail: One week after submission
Marks returned: Two weeks after submission

Submit a recorded video presentation on your recommended remediation option for the client and remediation action plan.

Due date: 19/04/2022 05:00 PM
Deadline for absolute fail: One week after submission
Marks returned: Two weeks after submission

Produce a professional report presenting a remediation options assessment and a remediation action plan for the client.

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

Assessment criteria

Marking scheme

Attendance Requirements

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

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(Week 10)		

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

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	