

CVEN9051

Masters Practice Project B

Term 3, 2022



Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Mitchell Harley	m.harley@unsw.edu.au		Room 302 CVEN Building (Mondays only)	(02) 8071 9883

Lecturers

Name	Email	Availability	Location	Phone
James Hayes	j.e.hayes@unsw.edu.au		H22 Rm305	

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

CVEN9051 forms the second part of the Coursework Thesis program, and is completed in the semester after the completion of CVEN9050 Thesis A. In preparing your thesis topic in Thesis B for CVEN9051 you are able to select and nominate a Civil and/or Environmental Engineering topic that is of significant interest to you. Your topic may be associated with core elements such as Structural Design, Water and Hydraulics, Geotechnical Engineering, Transportation, Construction or Sustainability. Within Thesis B there are also project management elements that engineering professionals would be required to address and these elements will be incorporated as part of the Thesis B submission. This will enable all students to develop understanding of how their work impacts upon others and will allow them to identify the key communication pathways that are required to be addressed in the development of engineering solutions being offered. Consider the utility of your thesis topic in terms of your future career, either by reinforcing and presenting your skills in a chosen field, or by experiencing and developing capabilities in a new area. Your thesis is a requirement for your degree, however it also presents an opportunity to explore areas of interest and demonstrate expertise when advancing in your profession. As the course will involve several submissions throughout the semester, Thesis B will be completed incrementally with guidance provided at each stage.

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, PE1.2, PE1.3, PE1.4, PE1.5, PE1.6, PE2.1, PE2.2, PE2.3, PE2.4, PE3.1, PE3.2, PE3.4
2. Assess relevant disciplinary knowledge and acknowledge its interdisciplinary context within a literature review and/or project	PE1.3, PE1.5, PE1.6, PE2.3, PE3.5, PE3.6
3. Demonstrate a capacity for high level analytical and critical thinking to create a novel solution considering related technical, social, political, environmental and economic issues	PE1.2, PE1.3, PE1.4, PE1.5, PE1.6, PE2.1, PE2.2, PE2.3, PE2.4
4. Demonstrate effective written and/or verbal communication skills in professional and lay domains.	PE3.2, PE3.4, PE3.5

Learning Outcome	EA Stage 1 Competencies
5. Engage in independent and reflective learning when solving the chosen engineering design problem	PE3.1, PE3.2, PE3.3, PE3.4
6. Apply principles of ethical practice and social responsibility to the chosen engineering design problem	PE1.5, PE1.6, PE3.1

Teaching Strategies

The Masters Practice Project B aims for students to produce an individual report in which each student works under the guidance of academic staff with input from industry specialists. Students will have adequate opportunities to receive individual advice and mentoring. 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. Proposal / Problem Statement	5%	29/09/2022 11:59 PM	1, 3
2. Literature Review	20%	24/10/2022 11:59 PM	2
3. Presentation and Peer Marking	25%	Week 8, Week 9	4
4. Final Report	50%	23/11/2022 11:59 PM	1, 2, 3, 4, 5, 6

Assessment 1: Proposal / Problem Statement

Assessment length: 2 pages max

Due date: 29/09/2022 11:59 PM

Details regarding chosen project including; what is the problem; why are you attempting to solve/investigate it; your initial approach; and timeline. Marks will be allocated on ease of comprehension and feasibility.

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

Assessment 2: Literature Review

Assessment length: 10 pages (max)

Due date: 24/10/2022 11:59 PM

Critical evaluation of key literature in your chosen topic. Your literature review should synthesize the available knowledge of your topic while identifying key research gaps.

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

Assessment 3: Presentation and Peer Marking

Due date: Week 8, Week 9

Oral presentation of your research topic to your instructors and peers during the workshop session in Weeks 8 and 9. 5% will be allocated to the peer review.

Assessment 4: Final Report

Assessment length: 30 pages (max)

Due date: 23/11/2022 11:59 PM

Formal written report containing an executive summary, introduction, literature review, methods, key findings, conclusions, and recommendations. A one page Fact sheet and communications summary will also be required.

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

Attendance Requirements

Students are strongly encouraged to review all lecture material. Attendance at workshops is required. Contact Course Authority in writing if more than one workshop will be missed. Attendance at the Weeks 8 and 9 presentation sessions are compulsory.

Course Schedule

[View class timetable](#)

Timetable

Date	Type	Content
Week 1: 12 September - 16 September	Lecture	What is a problem statement and how to plan research (<i>Mitchell Harley</i>)
	Workshop	Scoping your research area
Week 2: 19 September - 23 September	Lecture	Endnote, ethics and conducting research (<i>James Hayes</i>)
	Workshop	Defining your research question
Week 3: 26 September - 30 September	Lecture	How to write a literature review (<i>James Hayes</i>)
	Workshop	How to structure your literature review
	Assessment	Proposal / Problem Statement
Week 4: 3 October - 7 October	Lecture	NO LECTURE/WORKSHOP DUE TO PUBLIC HOLIDAY
Week 5: 10 October - 14 October	Lecture	Refining your topic and Presenting your research (<i>Mitchell Harley</i>)
	Workshop	Identifying research gaps
Week 6: 17 October - 21 October	Lecture	NO LECTURE/WORKSHOP DUE TO WEEK 6 FLEXIBILITY WEEK
Week 7: 24 October - 28 October	Lecture	Presenting your research (Verbal) (<i>James Hayes</i>)
	Workshop	Planning your research
	Assessment	Literature Review
Week 8: 31 October - 4 November	Workshop	Presentations + Peer Review
	Workshop	Presentations + Peer Review
	Assessment	Presentation and Peer Marking

Week 9: 7 November - 11 November	Workshop	Presentations + Peer Review
	Workshop	Presentations + Peer Review
	Assessment	Presentation and Peer Marking
Week 10: 14 November - 18 November	Lecture	Communicating technical information (<i>Mitchell Harley</i>)
	Workshop	Professional report writing
Study Week: 21 November - 24 November	Lecture	Being a Professional Engineer (<i>Mitchell Harley</i>)
	Workshop	Editing clinic
	Assessment	Final Report

Resources

Prescribed Resources

- Additional materials provided on Moodle
- Resources relating to the preparation of Engineering Reports and scientific writing can be found at iWrite <http://iwrite.unsw.edu.au/iwrite/ENGINEERING/Getting-Started/For-Students.html>

Course Evaluation and Development

Based on Student Feedback in previous years, the number of assessments has been reduced. Flipped learning has been initiated with asynchronous lecture materials being delivered online and realtime workshops. This was initiated to streamline information delivery and student engagement.

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 T3 2022 will be held online between 25th November - 8th December 2022 inclusive, and supplementary exams between 9th - 13th January 2023 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	✓