



CVEN9050

Masters Practice Project A

Term One // 2021

Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Ruth Fisher	ruth.fisher@unsw.edu.au		H20 Rm 205	(02) 9385 5073

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

Credit Points 6

Summary of the Course

This course is a core research enquiry course for those enrolled in either the Civil or Environmental Engineering streams in the 8621 accredited Masters program. This is the first part of the coursework project, with CVEN9051 Masters Practice Project B, following this course in a later term. 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 project work is expected to reinforce the student's ability and confidence in the written communication of technical information. The intention with this course is to bring into focus the skills needed to investigate real life projects. The Masters Practice Project A topic is presented to the student as it would be in industry and each student is required to prepare an individual submission by way of an Engineering Report that contains all of the elements required within the Assessment Overview. Topics are related to industry projects selected from contemporary practice. The work involves industry based investigations and design applications.

The selected theme for T1 and T2 2021 is Liveable and Resilient Neighbourhoods.

As the course will involve several submissions throughout the semester, Thesis A 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.

Thesis A will build on the skills developed in previous practice related subjects and address programme attributes:

- An in-depth engagement with the relevant disciplinary knowledge in its inter-disciplinary context
- Capacity for analytical and critical thinking and for creative problem solving
- Ability to engage independent and reflective learning
- Information literacy
- Skills for collaborative and multi-disciplinary work
- A respect for ethical practice and social responsibility
- Skills for effective communication

Course Learning Outcomes

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

Learning Outcome	EA Stage 1 Competencies
1. Assemble comprehensive and reliable data as part of a research project	PE1.5, PE2.2, PE2.4, PE3.1, PE3.4
2. Appraise and critique an aspect of an infrastructure system via a thorough literature review	PE1.3, PE1.4, PE1.6, PE2.1, PE2.2
3. Demonstrate critical thinking and research skills such as compiling a literature review, conducting a critique and participating in critical discussions relating to the role of civil and environmental engineers	PE1.3, PE1.4, PE1.5
4. Apply engineering principles, such as risk management, decision making and design to identify and investigate real-world problems	PE1.2, PE2.1, PE2.4, PE3.4
5. Student will demonstrate professional level written and verbal skills through the production of a self-contained technical report and presentation	PE3.1, PE3.2, PE3.4, PE3.5, PE3.6

Teaching Strategies

The Masters Practice Project A produces an individual enquiry based 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 industry based investigations and design applications.

The teaching strategies that will be used and their rationale.

Private Study	<ul style="list-style-type: none"> • Review lecture material and supplied documentation • Do set problems and assignments • Reflect on class problems and assignments • Download materials from Moodle and find own sources where required • Keep up with notices and find out marks via Moodle
Lectures	<ul style="list-style-type: none"> • Find out what you must learn • Engage with guest lecturer presentations • Hear announcements on course changes
Workshops	<ul style="list-style-type: none"> • Be guided by Demonstrators • Participate in group discussions and co-learning • Ask questions and clarify understanding
Assessments	<ul style="list-style-type: none"> • Demonstrate your knowledge and skills • Demonstrate higher understanding, critical thinking and problem solving • Demonstrate presentation and reporting skills to a professional level

Assessment

Assessment Tasks

Assessment task	Weight	Due Date	Student Learning Outcomes Assessed
Casestudy Identification	20%	01/03/2021 11:59 PM	1, 2, 5
Presentation	15%	29/03/2021 09:00 AM	1, 2, 4, 5
Peer Review/Critique	15%	06/04/2021 11:59 PM	3, 5
Engineering Report	50%	25/04/2021 11:59 PM	1, 2, 3, 4, 5

Assessment Details

Assessment 1: Casestudy Identification

Start date: Not Applicable

Length: 2 pages of written text, 1 page of figures/tables

Details:

Students are required to define and compile information relating to the casestudy area they will investigate this semester.

[**Comment:** Whilst marking is progressive across a Term, a student can assemble the elements in Practice Project Report A into a single *Engineering Report* document they can present to others (at say, an interview).

Additional details:

See Moodle for details

Submission notes: Through Turnitin

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

Assessment 2: Presentation

Length: 5 minute video presentation

Details:

Students will present their findings on an allocated topic on a video presentation. Topics will be allocated from one of three chapter themes two weeks before (15/3/2021). Videos will be shown during the workshop and questions asked. The presentation will be assessed based on the oral fluency, content and clarity of the presentation.

Additional details:

See Moodle for specific requirements regarding the task

Submission notes: Through the workshop tool on Moodle

Assessment 3: Peer Review/Critique**Details:**

Students will be graded on how well they review and provide feedback to three peers on their written chapter drafts

Additional details:

Chapter drafts must be submitted by each student along with their presentations for Assessment 2. See Moodle for details

Assessment 4: Engineering Report

Length: 10-20 pages

Details:

This final report will compile the previous work into one complete document evaluating aspects of liveability and resilience of local neighbourhoods. The main feature will be an Executive Summary, content of the 3 themes explored in the workshops, as well as identification of future opportunities and research areas.

Marks will also be allocated relating to the professional presentation of the whole document.

Additional details:

See Moodle for Details

Submission notes: Through Turnitin

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 Week 7 presentation session is compulsory.

Course Schedule

[View class timetable](#)

Timetable

Date	Type	Content
Week 1: 15 February - 19 February	Lecture	This lecture will be held online, attendance is encouraged. All subsequent lectures will be offline/asynchronous. Introduction to the semester, Liveability
	Workshop	What is liveability to you, Being a professional engineer
Week 2: 22 February - 26 February	Workshop	Defining your Research area, Report writing
	Online Activity	Infrastructure Report Writing, Presenting an argument
Week 3: 1 March - 5 March	Workshop	Research Materials Chapter theme 1
	Online Activity	Documentation and data quality Walkability and Liveable cities
	Assessment	Case study Identification due Monday 1st March 11:59 PM
Week 4: 8 March - 12 March	Workshop	OH&S, Reading journal papers Chapter theme 2
	Online Activity	Accessibility Health and Safety
Week 5: 15 March - 19 March	Workshop	Blue-green infrastructure Chapter theme 3
	Online Activity	Environmental quality Critical and Systems thinking
Week 6: 22 March - 26 March		
Week 7: 29 March - 2 April	Workshop	Presentation and questions
	Assessment	Presentation and Chapter Draft

		Monday 29th March 9 AM
	Online Activity	Peer Review and Critiquing
Week 8: 5 April - 9 April	Online Activity	Project Planning
	Assessment	Peer Review Tuesday 6th April 11:59 PM
Week 9: 12 April - 16 April	Online Activity	Learning from Feedback, Editing
	Workshop	Questions and Consultations
Week 10: 19 April - 23 April	Online Activity	Executive Summaries and Reflective practice
	Workshop	Editing and Proof Reading
		Research Ideas
	Assessment	Final Report
		Sunday 25th April 11:59 PM

Resources

Prescribed Resources

- Weekly online learning modules are provided on Moodle instead of online lectures
- 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>
- Additional readings will be provided on Moodle.

Recommended Resources

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 following online lectures due to COVID-19, and 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.

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

[Key UNSW Dates](#) - eg. Census Date, exam dates, last day to drop a course without academic/financial liability etc.

Final Examinations:

Final exams in Term 1 will be held online between 30th April - 13th May inclusive. You are required to be available on these dates. Please do not to make any personal or travel arrangements during this period.

Supplementary Examinations:

Supplementary Examinations for Term 1 2021 will be held on 24th - 28th May inclusive should you be required to sit one. You are required to be available on these dates. Please do not to make any personal or travel arrangements during this period.

ACADEMIC ADVICE

For information about:

- Notes on assessments and plagiarism;
- Special Considerations: student.unsw.edu.au/special-consideration;
- General and Program-specific questions: [The Nucleus: Student Hub](#)
- Year Managers and Grievance Officer of Teaching and Learning Committee, and
- CEVSOC/SURVSOC/CEPCA

Refer to Academic Advice on the School website available at:

<https://www.engineering.unsw.edu.au/civil-engineering/student-resources/policies-procedures-and-forms/academic-advice>

Image Credit

Synergies in Sound 2016

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	✓