CVEN9050

Masters Practice Project A

Term 2, 2023

Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Mitchell Harley	m.harley@unsw.edu.au	Fridays 2-3pm	Room 302 Civil and Environmental Engineering Building (Fridays only)	(02) 8071 9883

Demonstrators

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

This course is a core research enquiry course for students in 8621 Master of Engineering and 8338 Master of Engineering Science programs. 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.

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. Assemble comprehensive and reliable data as part of an engineering 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 professional level written and verbal skills through the production of a self-contained technical report and presentation	PE3.1, PE3.2, PE3.3, PE3.4, PE3.5
4. 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
5. Apply engineering principles, such as risk management, decision making and design to identify and investigate real-world	PE1.2, PE2.1, PE2.4, PE3.4

Learning Outcome	EA Stage 1 Competencies
problems	

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.

Assessment

Assessment task	Weight	Due Date	Course Learning Outcomes Assessed
1. Case Study Identification	20%	18/06/2023 11:59 PM	1, 2, 3, 4, 5
2. Presentation	15%	Week 7, Week 8	1, 2, 3, 4, 5
3. Peer Review/Critique	15%	23/07/2023 11:59 PM	2, 4
4. Engineering Report	50%	06/08/2023 11:59 PM	1, 2, 3, 4, 5

Assessment 1: Case Study Identification

Assessment length: 2 pages of written text, 1 page of figures/tables
Submission notes: Through Turnitin
Due date: 18/06/2023 11:59 PM

Students are required to define and compile information relating to the specific case study area they will investigate throughout this term.

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

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

Additional details

See Moodle for details

Assessment 2: Presentation

Assessment length: 5 minute in-class presentation
Due date: Week 7, Week 8

Students will present their findings in class on an allocated topic. The topics will be allocated from one of three chapter themes two weeks prior. Audience members will have 2 minutes to ask questions related to the presentation. The presentation will be assessed based on the oral fluency, content and clarity of the presentation and clarity of the presentation

Additional details

Chapter drafts must be submitted in Week 7 (regardless of when you are presenting). See Moodle for details

Assessment 3: Peer Review/Critique

Submission notes: Via Moodle
Due date: 23/07/2023 11:59 PM

Students will be assigned 3 draft chapters from their peers (submitted Week 7) to provide peer review

and critique. Students will be graded on how well they review and provide feedback to these chapter drafts.

Assessment 4: Engineering Report

Assessment length: Minimum length 10 pages, Maximum length 20 pages
Submission notes: Through Turnitin
Due date: 06/08/2023 11:59 PM

This final report will compile the previous work into one complete document evaluating aspects of liveability and sustainability 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.

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

Additional details

See Moodle

Attendance Requirements

Attendance at workshops is required. Contact the Course Convener in writing if more than one workshop will be missed.

Lectures will be held immediately before the workshops and will provide essential imformation needed to fullfill the assessment tasks.

Attendance at the Week 7/8 presentation sessions is compulsory.

Course Schedule

View class timetable

Timetable

Date	Type	Content
Week 1: 29 May - 2 June	Lecture	Week 1 Lecture topic: "Overview of course and introduction to couse theme"
	Workshop	Week 1 workshop activities: 1) What is liveability to you? 2) Identifying a case study area
Week 2: 5 June - 9 June	Lecture	Week 2 Lecture topic: "Becoming a pro at engineering report writing"
	Workshop	Week 2 Workshop topic: "Creating professional report figures and graphs"
Week 3: 12 June - 16 June	Lecture	Week 3 Lecture Topic: "Theme 1: Urban infrastructure - desktop study"
	Workshop	Week 3 Workshop Topic: "Fact checking and referencing"
	Assessment	Case study Identification due Sunday this week at 11:59PM (18 June)
Week 4: 19 June - 23 June	Lecture	Week 4 Lecture Topic "Theme 2: Accessibility and Walkability"
	Workshop	Week 4 Workshop Activity: "Fieldwork, Health and Safety"
Week 5: 26 June - 30 June	Lecture	Week 5 Lecture Topic "Theme 3: Blue-green Infrastructure - modelling study".
	Online Activity	Week 5 Workshop Activity: "Presentation Skills"
Week 6: 3 July - 7 July		
Week 7: 10 July - 14 July	Lecture	Presentation and questions (Session 1)

	Workshop	Presentation and questions (Session 2)
	Assessment	Presentation Slides (Presentation Session 1 and 2 students ONLY) and Chapter Draft (ALL STUDENTS) Friday 14th July 9 AM
	Assessment	Presentation
Week 8: 17 July - 21 July	Lecture	Presentation and questions (Session 3)
	Workshop	Presentation and questions (Session 4)
	Assessment	Peer Review Sunday 23rd July 11:59 PM
	Assessment	Presentation
Week 9: 24 July - 28 July	Lecture	Week 9 Lecture : "Learning from feedback"
	Workshop	Questions and Consultations
Week 10: 31 July - 4 August	Lecture	Week 10 Lecture: "Final report - editing, proof reading and last-minute tips"
	Workshop	Questions and Consultations
	Assessment	Final Report Sunday 6th August 11:59 PM

Resources

Recommended Resources

Open Source QGIS Software useful for workshop activities and data presentation

UNSW Report Writing Support information available at https://www.student.unsw.edu.au/report-writing-support

Course Evaluation and Development

Based on Student Feedback in previous years, the number of assessments has been reduced.

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 2023 will be held on campus between Friday 11th and Thursday 24th August (inclusive), and Supplementary Exams between Monday 4th and Friday 8th September (inclusive). You are required to be available on these dates. Please do not to make any personal or travel arrangements during this period.

For students enrolled in the distance offering of a postgraduate course, and who reside further than 100km from UNSW Kensington campus, will be contacted regarding sitting an external exam. The school's External Exam Policy can be found on the Intranet.

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://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	