

# CVEN4106 CONSTRUCTION PRACTICUM

## COURSE DETAILS

<b>Units of Credit</b>	6	
<b>Contact hours</b>	5 hours per week	
<b>Lecture</b>	Monday, 18:00 – 21:00	online
<b>Seminar</b>	Wednesday, 18:00 – 20:00	online
<b>Course Coordinator and Lecturer</b>	Dr Shane Geha mhoang@eg.com.au Off campus office	

## INFORMATION ABOUT THE COURSE

Pre-requisites: CVEN2101 and CVEN3101

## HANDBOOK DESCRIPTION

This course involves students working on a hands-on infrastructure project. Projects will involve infrastructure such as buildings, bridges, water supply and drainage, and historical structures. Within a nominated project, students are expected to develop, design, estimate, plan, construct, and manage the processes. The emphasis in the course is on the students learning by doing and having a hands-on approach. Students take theory learned in other courses and apply it in practice. Students are expected to think for themselves, deal with situations that they have not come across before, and think in a practical and professional way. Each time the course is offered, it will be based on a different project so that students will need to solve new problems and address novel issues.

<https://www.handbook.unsw.edu.au/undergraduate/courses/2020/CVEN4106/>

## OBJECTIVES

The objectives of the course are:

- Understanding the development Cycle of Projects
- Be able to carry out Feasibility Studies for Projects
- Understanding the various approvals required for Projects in NSW
- Basic understanding of Law, Planning and Risk as they relate to Engineering Projects
- Understanding the Sensitivity Analyses for Projects

- Basic understanding of Architectural and Aesthetic concepts for Projects
- Understanding Project Viability and Factors contributing to it
- Understanding the Sales and Delivery process for Projects

In addition, the course aims to foster:

- Capacity for analytical thinking and for creative problem solving;
- Ability to engage independent and reflective learning;
- Develop the skills for collaborative and multi-disciplinary work by working effectively in small teams;
- Information literacy; and
- Skills for effective communication

These objective and course aims will be achieved using:

- Lectures and assigned readings;
- Workshops; and
- Assessment Tasks (which includes a Final Examination)

List of 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

## TEACHING STRATEGIES

The teaching strategies that will be used and their rationale.

<b>Private Study</b>	<ul style="list-style-type: none"> <li>• Review lecture material and textbook</li> <li>• Do set problems and assignments</li> <li>• Join Moodle discussions of problems</li> <li>• Reflect on class problems and assignments</li> <li>• Download materials from Moodle</li> <li>• Keep up with notices and find out marks via Moodle</li> </ul>
<b>Lectures</b>	<ul style="list-style-type: none"> <li>• Find out what you must learn</li> <li>• See methods that are not in the textbook</li> <li>• Follow worked examples</li> <li>• Hear announcements on course changes</li> </ul>
<b>Workshops</b>	<ul style="list-style-type: none"> <li>• Be guided by Demonstrators</li> <li>• Practice solving set problems</li> <li>• Ask questions</li> </ul>
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Demonstrate your knowledge and skills</li> <li>• Demonstrate higher understanding and problem solving</li> </ul>

## EXPECTED LEARNING OUTCOMES

*This course is designed to address the learning outcomes below and the corresponding Engineers Australia Stage 1 Competency Standards for Professional Engineers as shown. The full list of Stage 1 Competency Standards may be found in Appendix A.*

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

Learning Outcome		EA Stage 1 Competencies
1.	<i>Develop an understanding of the basic concepts.</i>	<i>PE1.1, PE1.2, PE1.6</i>
2.	<i>Communicate effectively both written and verbally.</i>	<i>PE3.1, PE3.2, PE3.5</i>
3.	<i>By the conclusion of the course, the students will be able to understand the lifecycle of Project.</i>	<i>PE2.2, PE2.3, PE3.3, PE3.5</i>

For each hour of contact it is expected that you will put in at least 1.5 hours of private study.

<b>COURSE PROGRAM</b>
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**Term 3 2020**

Date	Topic
14/09/2020 (Week 1)	Subject Overview and Conceptualisation Phase
21/09/2020 (Week 2)	Feasibility Phase and Selection of Project Options
28/09/2020 (Week 3)	Approval Phase
06/10/2020 (Week 4)	Project Procurement
12/10/2020 (Week 5)	Post-Project Phase
<b>19/10/2020 (Week 6)</b>	<b>Non-Teaching week</b>
26/10/2020 (Week 7)	Real Examples of Project
02/11/2020 (Week 8)	Engineering Meets Law
09/11/2020 (Week 9)	Guest lecturer
16/11/2020 (Week 10)	Course Review

<b>ASSESSMENT</b>
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1. Individual Assignment 1

This assignment will require students to compose a written report in the Harvard style, relating to the lecture and workshop content. The basis of this work is for students to illustrate their understanding of the knowledge learnt throughout the course, and demonstrate students' ability to coherently construct a report.

2. Video presentation

This assignment requires each students in their allocated groups to submit a video of them presenting in front of a 'panel'. The way you present accurate technical information is significant part of this assignment. Each group must provide a one-page outline of their presentation. The assignment will imbue students with the real-life experience of presenting to a Board, working in teams, and demonstrate students' public speaking skills.

3. Final Examination

The Final Examination will be externally conducted and scheduled by the UNSW Examinations Branch. Students will be informed via MyUNSW of the timetabling and location of this 2-hour examination. This examination is to assess students understanding of the course's significant technical content, based upon the presented lecture and workshop material given through the semester.

All assignments and reports are to be submitted using the 'Turnitin' submission tool. All assignments and reports are to be submitted by uploading onto the Moodle. No email copies will be accepted.

**Note: Supplementary Examinations for Term 3 2020 will be held on Monday 11<sup>th</sup> January – Friday 15<sup>th</sup> January 2021 (inclusive) should you be required to sit one. You are required to be available during these dates. Please do not to make any personal or travel arrangements during this period.**

Details of each assessment component, the marks assigned to it, the criteria by which marks will be assigned, and the dates of submission are set out overleaf.

<b>PENALTIES</b>
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*Late submission will receive a 10% deduction penalty per day. Late submission up to 5 days will be marked and will receive the appropriate penalty deductions. Any submission made that are more than 5 days late will not be accepted for marking.*

**ASSESSMENT OVERVIEW**

Item	Length	Weighting	Learning outcomes assessed	Assessment Criteria	Due date and submission requirements	Deadline for absolute fail	Marks returned
1. Individual Assessment 1	3000 words	20%	1, 2	The assignment is to be constructed in the Harvard format. The report will demonstrate students' understanding of content presented in the lecture. It will be assessed based on content and format.	By 23:59pm on Thursday 1 <sup>st</sup> October 2020	By 23:59pm on Thursday 8 <sup>th</sup> October 2020	By Friday 9 <sup>th</sup> October 2020
2. Video presentation	15 minute presentation	30%	1, 2	In groups, students are to record a video of them presenting to a "Board" using accurate, technical information. Each student is expected to complete an evaluation form, which will be used to determine the overall individual mark. Whilst the 1-page outline is a requirement of the assessment, only the video presentation will be assessed.	By 23:59pm on Thursday 6 <sup>th</sup> November 2020	By 23:59pm on Thursday 13 <sup>th</sup> November 2020	
3. Final examination	2 hours (plus 10 minutes reading)	50%	1, 3	The Final Examination will be conducted in the UNSW formal examination period covering the work of the entire course.	To be advised	Not applicable	Not applicable

## RELEVANT RESOURCES

- There are no set textbooks for this court

## DATES TO NOTE

Refer to MyUNSW for Important Dates available at:

<https://student.unsw.edu.au/dates>

## 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 ADVICE

For information about:

- Notes on assessments and plagiarism;
- Special Considerations: [student.unsw.edu.au/special-consideration](https://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>

## Appendix A: Engineers Australia (EA) Competencies

### Stage 1 Competencies for Professional Engineers

	<b>Program Intended Learning Outcomes</b>
<b>PE1: Knowledge and Skill Base</b>	PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals
	PE1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing
	PE1.3 In-depth understanding of specialist bodies of knowledge
	PE1.4 Discernment of knowledge development and research directions
	PE1.5 Knowledge of engineering design practice
	PE1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice
<b>PE2: Engineering Application Ability</b>	PE2.1 Application of established engineering methods to complex 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
<b>PE3: Professional and Personal Attributes</b>	PE3.1 Ethical conduct and professional accountability
	PE3.2 Effective oral and written communication (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