



School of Civil and Environmental Engineering

Term 1, 2020

CVEN9743

CONSTRUCTION ENGINEERING

PRACTICES

#### COURSE DETAILS

<b>Units of Credit</b>	6 UoC
<b>Contact hours</b>	4 hours per week
<b>Class</b>	Monday, 18:00 . 20:00

of infrastructure projects;

- < Identifying key factors that will impact upon construction process selection;
- < Investigate state-of-the-art practices and techniques presently being employed in industry;
- < Addressing the physical, political, social and economic constraints issues in developing construction solutions to infrastructure projects; and,
- < Selection of construction methods that produce infrastructure that is are environmentally sustainable and ethically and sociably responsible.

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 objectives and course aims will be achieved using:

- < Lectures and assigned readings;
- < Workshops; and,
- < The course Assessment Tasks

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

This course will be presented as a series of lectures, each accompanied by additional reading material. Following each lecture, a workshop will be conducted for you to practice implementation of key knowledge acquired from the lecture.

**In Term 1, 2020 the CVEN9743 course will be delivered in three x (3 week) sessions. These sessions will be assessed progressively throughout the term in Weeks 4, 8 & 11.**

Specific teaching and learning strategies include:

### **Private Study**

- < Download materials from UNSW Moodle
- < Review lecture material and additional reading
- < Complete all assignments

	<ul style="list-style-type: none"> <li>&lt; Hear announcements on course changes</li> </ul>
<b>Workshops</b>	<ul style="list-style-type: none"> <li>&lt; Be guided by Lecturer/ Demonstrator(s)</li> <li>&lt; Practice solving set problems</li> <li>&lt; Ask questions during or at the end of a Workshop session</li> </ul>
<b>Assessments</b>	<ul style="list-style-type: none"> <li>&lt; Enhance you knowledge by undertaking necessary research to complete given tasks</li> <li>&lt; Demonstrate your knowledge and skills</li> <li>&lt; Demonstrate higher understanding and problem solving</li> <li>&lt; Do not copy sections from textbooks or websites, always use appropriate references for sourced material</li> <li>&lt; In preparing an assessment element pay particular attention to the instructional advice provided by the lecturer to maximise your mark</li> <li>&lt; Preparing for scheduled the in-class tests scheduled in the Term</li> </ul>

**All course reading materials, course communications, student questions, Assignment and Report submissions, Assignment and Report grades (including feedback) will be made using the course Moodle.**

<b>EXPECTED LEARNING OUTCOMES</b>
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**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. Develop an understanding of some of the construction methods and techniques used in developing civil infrastructure projects	PE1.1, PE1.3, PE2.3, PE2.4
2. Through independent research, (which is student-centred and self-directed learning), a student should be able to identify the construction practices required of an infrastructure project and be able to acquire the knowledge to enable them be able to contribute within a multi-disciplinary infrastructure team	PE1.1, PE1.2, PE1.4, PE2.3, PE2.4
3. Communicate developed solutions concisely, by presenting their work as a written submission or verbally	PE3.2, PE3.3, PE3.4, PE3.5, PE3.6
4. Complete such work if assigned to a multi-disciplinary team	PE2.2, PE2.3, PE2.4, PE3.1, PE3.2, PE3.3, PE3.4, PE3.5, PE3.6

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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All Lectures and Workshops will be ordinarily be presented by Mr Robert Holdom and students will be advised of changes to this expectancy.

The weekly Lecture and Workshop will be an integrated evening program. The weekly allocated time (18:00 - 21:00h) will be as follows:

This course will be delivered in three × (3 week) sessions and students will be progressively assessed by three separate Class Tests. Class Test 1 will assess the material instructed in weeks 1, 2 & 3. Class Test 2 will assess the material instructed in weeks

2. Group Report

You are required to work in groups of three students and to produce a Group Report from one of the nominated topics. After reading the assessment requirement, each group will nominate their topic preferences for approval. Student groups will be advised of their approved topic and can then commence preparing their submission from that notification. In preparing this work, students will have the opportunity to learn about why different forms of construction methods, processes and construction solutions were taken and the impacts that those decisions have had in the construction delivery of these pieces of significant infrastructure and its impact on community at large.

**PENALTIES**

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



a. Topic Approval		2%	2	Students to form a group of three and nominate their topics and have it approved	Before 5pm on 12 <sup>th</sup> March, 2020	Not meeting deadline	Within 1 week
b. Final Submission	4500 words	23%	2	A Group Report is to be submitted	Before 5pm on 19 <sup>th</sup> April, 2020	Before 5pm on 24 <sup>th</sup> April, 2020	Within 2 weeks





