



School of Civil and Environmental Engineering

Term 1, 2022

**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	Rex Vowels Theatre and online
<b>Workshop</b>	Monday, 20:00 – 21:00	Rex Vowels theatre and on-line
<b>Class Tests</b>	Saturdays, 10:00 – 12:00 in Weeks 4, 7, & 10	On-line

### Course Coordinator and Lecturer

Robert Holdom  
email: [Robert.Holdom@unsw.edu.au](mailto:Robert.Holdom@unsw.edu.au)  
office: CE 211  
phone: 02 9385 7773

## INFORMATION ABOUT THE COURSE

This course is designed to develop/ extend your knowledge and understanding about civil engineering and its place in developing infrastructure projects. Successful delivery of project infrastructure is dependent upon strong leadership of a multi-disciplinary team, innovative construction methodologies, and effective

## OBJECTIVES

The objectives of the course are to:

- Provide a detailed outline on specific construction methods and techniques employed in the delivery 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;

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

any content. The Week 1 Lecture uploading may take several days for it to be made available on the Moodle, but beyond that the weekly lecture recordings are normally expected to be available on the course Moodle within 24 hours.

This course will be delivered in three x (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 4, 5, & 7. Class Test 3 will assess the material instructed in weeks 8, 9, & 10.



**ASSESSMENT OVERVIEW**

<b>Item</b>	<b>Length</b>	<b>Weighting</b>	<b>Learning outcomes assessed</b>	<b>Assessment Criteria</b> <i>(this needs to explicitly describe what students are expected to demonstrate in the task)</i>	<b>Due date and submission requirements</b>	<b>Deadline for absolute fail</b>	<b>Marks returned</b>
<b>1. Individual Assignment</b>							
Individual Assignment	3000 words	30%	1	Each student is required to prepare an individual submission in Report form in accordance with the guidelines provided within the assignment outline. Marks will be allocated on content, format of the			

a. Topic Approval		2%	2	Students to form a group of three and nominate their topics and have it approved	Before 5pm on 3 <sup>rd</sup> March 2022	Not meeting deadline	Within 1 week
b. Final Submission	4500 words	23%	2	A Group Report is to be submitted	Before 5pm on 27 <sup>th</sup> March 2022	Before 5pm on 1 <sup>st</sup> April 2022	Within 2 weeks





**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