



School of Civil and Environmental Engineering

Term 1, 2022

CVEN9743

CONSTRUCTION ENGINEERING PRACTICES

COURSE DETAILS

Units of Credit	6 UoC	
Contact hours	4 hours per week	
Class	Monday, 18:00 – 20:00	Rex Vowels Theatre and online
Workshop	Monday, 20:00 – 21:00	Rex Vowels theatre and on-line
Class Tests	Saturdays, 10:00 – 12:00 in Weeks 4, 7, & 10	On-line

Course Coordinator and Lecturer

Robert Holdom
email: 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;

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

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

Item	Length	Weighting	Learning outcomes assessed	Assessment Criteria <i>(this needs to explicitly describe what students are expected to demonstrate in the task)</i>	Due date and submission requirements	Deadline for absolute fail	Marks returned
1. Individual Assignment							

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 submitted			
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a. Topic Approval		2%	2	Students to form a group of three and nominate their topics and have it approved	Before 5pm on 3 rd 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 th March 2022	Before 5pm on 1 st April 2022	Within 2 weeks

RELEVANT RESOURCES

There are no set textbooks for this course. The lecturer will provide you with prescribed readings for each lecture topic.

- You are required within this course to undertake your own literature research. This should be discussed with the UNSW library staff as to how you can undertake independent research and find your resources
- Additional materials provided on Moodle.
- Recommended Internet sites.

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Appendix A: Engineers Australia (EA) Competencies

Stage 1 Competencies for Professional Engineers

	Program Intended Learning Outcomes
PE1: Knowledge and Skill Base	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
PE2: Engineering Application Ability	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
PE3: Professional and Personal Attributes	PE3.1 Ethical conduct and professional accountability
	PE3.2 Effective oral and written communication (professional and la4 0.48-12.2 (l)p..1 (s))TJoach