Unit Outline (Higher Education)

Institute / School:	Institute of Innovation, Science & Sustainability
Unit Title:	Engineering Construction
Unit ID:	ENGIN4203
Credit Points:	15.00
Prerequisite(s):	(ENGIN2202)
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	030901

Description of the Unit:

This unit aims to assist you in preparing yourself for the role of construction engineer in construction projects. You will become familiar with different aspects of construction projects. Topics include equipment, methods, contracts, economics, quality assurance, and occupational health and safety in the construction industry. A brief introduction to sustainable construction and evolving trends and technologies in the construction industry is also included to equip you with the latest requirements in the industry.

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment

Course Level:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory						
Intermediate				✔		
Advanced						

Learning Outcomes:

Knowledge:

K1. Justify the use of different construction equipment and methods.

K2. Explain the concepts and benefits of sustainable and intelligent construction practices.

K3. Evaluate the different types of contracts used in construction projects.

Skills:

S1. Create and use relevant quality management documents, procedures, and systems in construction projects.

S2. Differentiate the tasks involved in a construction project and prepare a construction project schedule.

Application of knowledge and skills:

A1. Apply the principles of economics to construction equipment.

A2. Communicate engineering construction concepts and issues.

Unit Content:

Topics may include:

- An overview of the construction industry
- Occupational Health and Safety (OH&S) in the construction industry
- Quality assurance (QA) in construction projects
- Construction equipment and methods
- Construction economics
- Procurement and contracts in construction
- Basics of construction project management
- Introduction to intelligent construction
- Sustainability in the construction industry

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1	Assessment on construction equipment and methods	Q&A discussion forum	5% - 10%
K1, K2, S1, S3, A2	Carry out a site visit and prepare an engineering report on the type of construction equipment and processes and assess quality and safety related issues.	Site visit, report, and presentation	20% - 30%
S2, A1, A2	Construction project planning	Report	10% - 20%
K1 - K3, S3, A1, A2	A final test on any or all of the material covered in the course.	Final test	40% - 60%

Adopted Reference Style:

IEEE

Refer to the library website for more information

Fed Cite - referencing tool