

Unit Outline (Higher Education)

Institute / School: Institute of Innovation, Science & Sustainability

Unit Title: Engineering Capstone Project 2

Unit ID: ENGRG4003

Credit Points: 30.00

Prerequisite(s): (ENGRG4002)

Co-requisite(s): Nil

Exclusion(s): (ENGIN4002)

ASCED: 039999

Description of the Unit:

This unit enables students to use knowledge acquired during their studies to complete a chosen engineering research project. In the process, students will employ hands-on, analytical and computing skills relevant to their fields of studies. Students will finalise their survey of relevant literature and present their findings in a dissertation.

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

Work Experience:

No work experience

Placement Component: No

Supplementary Assessment: No

Supplementary assessment is not available to students who gain a fail in this Unit.

Course Level:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Learning Outcomes:

On successful completion of the unit the students are expected to be able to:

Knowledge:

- K1.** Plan and lead an engineering research project.
- K2.** Demonstrate an ability to apply critical and independent thinking.
- K3.** Explore and interpret the ethics and norms that guide engineering practice (including professionalism, innovation and adaptability).
- K4.** Recognize the importance of version control when undertaking engineering research.

Skills:

- S1.** Demonstrate proficiency in project management tools and concepts.
- S2.** Critically analyse scientific material to effectively synthesize information and/or ideas.
- S3.** Demonstrate an ability to effectively manage time and resources (independently and/or as a member of a team).
- S4.** Demonstrate an ability to effectively communicate (both written and oral) with others within the engineering community.

Application of knowledge and skills:

- A1.** Demonstrate the knowledge and skills needed to solve contemporary and emerging engineering challenges.
- A2.** Apply developed analytical skills to assess and infer engineering data.
- A3.** Prepare a complete critical analysis of the chosen engineering research topic.

Unit Content:

Topics may include:

1. Structuring and drafting of a research thesis.
2. Producing a research paper out of the thesis work.

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
S1-S4, A1, A2	Report on the progress of the research project	Report or logsheet	10% - 30%
K1-K4, S1-S4, A1-A3	Production of a complete and original written dissertation	Dissertation	60% - 80%
K1-K3, S1-S4, A1-A3	Oral presentation outlining the research project findings	Presentation to a panel of academics and peers	20% - 40%

Adopted Reference Style:

IEEE

Refer to the [library website](#) for more information

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