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: Student is not undertaking work experience in industry.

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						
Intermediate						
Advanced				✔		

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:

- Structuring and drafting of a research thesis.
- 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

Fed Cite - referencing tool