

Course Outline (Higher Education)

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| School: | School of Science, Engineering and Information Technology |
| Course Title: | DESIGN PROJECT 1 |
| Course ID: | ETCOR3150 |
| Credit Points: | 15.00 |
| Prerequisite(s): | (First and second year courses relevant to the stream of the candidate) |
| Co-requisite(s): | (ENCIV3050 (Civil students only)) |
| Exclusion(s): | (ENCIV3070 and ENCOR3011) |
| ASCED Code: | 039999 |

Description of the Course :

This is the final year capstone project for the 3 year Engineering Technologist degree, which runs for the entire year. ETCOR3250 is a continuation. Students will be expected to work as part of a team in a complex investigation and design task intended to allow students to demonstrate many core competencies expected of an Engineering Technologist.

Grade Scheme: Graded (HD, D, C, etc.)

Work Experience:

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

Placement Component: No

Program Level:

| AQF Level of Program | | | | | | |
|----------------------|---|---|---|---|---|----|
| | 5 | 6 | 7 | 8 | 9 | 10 |
| Level | | | | | | |
| Introductory | | | | | | |
| Intermediate | | | | | | |
| Advanced | | | ✓ | | | |

Learning Outcomes:

Knowledge:

- K1.** Explain the basis for what makes complex team based projects successful.
- K2.** Perform in a team environment to produce design solutions and reports.
- K3.** Explain how to approach, plan, research and complete all aspects of a complex design project.
- K4.** Explain how economic, safety and environmental aspects affect the project.

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Skills:

- S1.** Develop time management skills.
- S2.** Demonstrate high level skills in the use of project management tools and use these on the project.
- S3.** Demonstrate the ability to undertake all aspects of a lengthy, difficult, complex design project commensurate with what is expected of an engineering technologist.
- S4.** Demonstrate written and oral communication skills via a substantial design report and seminar presentation.

Application of knowledge and skills:

- A1.** Apply a substantial part of previously learned coursework to a design project relevant to the students discipline area.

Course Content:

Detailed content of the project will vary from a stream to stream but will, in general, involve design tasks associated with an engineering project. Typically, tasks would involve: - Design of the project parameters, constraints and requirements. - Use of computer aided engineering both analytically and graphically. - Project management activities.

Values:

- V1.** Recognise the responsibility that goes with the trust placed in engineering designers by the community.
- V2.** Appreciate the importance of quality in engineering design.
- V3.** Appreciate sustainability as a factor which impacts the applicability of future designs.
- V4.** Understand the importance of clear and unambiguous written and graphical communication of design outcomes.

Learning Task and Assessment:

| Learning Outcomes Assessed | Learning Tasks | Assessment Type | Weighting |
|----------------------------|---|---|-----------|
| K1-4, S1-4, A1 | Design of aspects of the project parameters and requirements. | Project proposal/report. | 20% - 40% |
| K1-4, S1-4, A1 | Project management task/s. | Production of a cost and/or time schedule estimate. | 10% - 20% |
| K1-4, S1-4. A1 | Design tasks. | Written and or oral report(s). | 40% - 60% |

Adopted Reference Style:

APA