COURSE OUTLINE

ENG600 Engineering Project Management Principles

School: School of Science, Technology and Engineering

2026 | Trimester 1

UniSC Moreton Bay	BLENDED LEARNING	Most of your course is on campus but you may be able to do some components of this course online.
Online	ONLINE	You can do this course without coming onto campus, unless your program has specified a mandatory onsite requirement.

Please go to unisc.edu.au for up to date information on the teaching sessions and campuses where this course is usually offered.

1. What is this course about?

1.1. Description

This course will prepare you as practising engineer to project manage the development of solutions in the workplace. You will be introduced to engineering project management theory, considering issues and challenges throughout a project life cycle. You will consider the project responsibilities of engineering managers and organisations, from the definition phase of a project to its conclusion. The emphasis is interdisciplinary and relevant to all fields of engineering practice.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – Asynchronous weekly learning material	1hr	Week 1	12 times
Seminar – On campus	1hr	Week 1	3 times
Tutorial/Workshop 1 – On campus	2hrs	Week 1	10 times
ONLINE			
Learning materials – Asynchronous weekly learning material	1hr	Week 1	12 times
Seminar – Online	1hr	Week 1	3 times
Tutorial/Workshop 1 – Online	2hrs	Week 1	10 times

1.3. Course Topics

Topics may include:

- Modern project management theory and practices
- Scope & quality management
- Development of aqusition strategies
- Managing project teams
- Selection of consultant and contractors Management of project resources and economics of engineering projects
- Management of human factors, risk, ethics, sustainability, and standards in engineering projects
- Progress and performance
- Communication processes
- Project measurement, evaluation, and closure

2. What level is this course?

600 Level (Specialised)

Demonstrating a specialised body of knowledge and set of skills for professional practice or further learning. Advanced application of knowledge and skills in unfamiliar contexts.

3. What is the unit value of this course?

12 units

4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES On successful completion of this course, you should be able to...	GRADUATE QUALITIES MAPPING Completing these tasks successfully will contribute to you becoming...	PROFESSIONAL STANDARD MAPPING * Engineers Australia Stage 1 Professional Engineer Competency Standards
1 Examine modern project management theory and demonstrate relevant practice techniques.	Knowledgeable	1, 1.4, 1.5
2 Evaluate alternative approaches to managing projects and identify optimal solutions to meet complex contextual demands in different sectors.	Creative and critical thinker	2, 2.1.a, 2.1.b, 2.1
3 Apply project management tools and processes to the scoping, planning and execution of an engineering project and monitoring of progress and performance.	Empowered	2, 2.4.b, 2.4.d, 2.4.e, 2.4, 3, 3.5.a, 3.5.c, 3.5.d, 3.5.e, 3.5
4 Apply acquisition strategies and participate constructively, as a member of a multi-disciplinary engineering team, in the selection of consultants, contractors and resources.	Empowered Engaged	2, 2.4.a, 2.4.b, 2.4, 3, 3.6.b, 3.6
5 Judge key issues in management systems and control with regard to quality management and WHS.	Ethical	2, 2.1.f, 2.2.j, 2.1, 2.2, 3, 3.1.c, 3.1
6 Evaluate the social, environmental, and economic principles, norms and accountabilities of sustainable engineering practice in engineering project management.	Sustainability-focussed	1, 1.6.c, 1.6.e, 1.6, 3, 3.1.c, 3.6.b, 3.1, 3.6

* Competencies by Professional Body

CODE	COMPETENCY
ENGINEERS AUSTRALIA STAGE 1 PROFESSIONAL ENGINEER COMPETENCY STANDARDS	

CODE	COMPETENCY
1	Elements of competency: Knowledge and Skill Base
1.6.c	Knowledge and Skill Base - Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline: Appreciates the social, environmental and economic principles of sustainable engineering practice.
1.6.e	Knowledge and Skill Base - Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline: Appreciates the formal structures and methodologies of systems engineering as a holistic basis for managing complexity and sustainability in engineering practice.
1.4	Knowledge and Skill Base: Discernment of knowledge development and research directions within the engineering discipline.
1.5	Knowledge and Skill Base: Knowledge of engineering design practice and contextual factors impacting the engineering discipline.
1.6	Knowledge and Skill Base: Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline.
2	Elements of competency: Engineering Application Ability
2.1.a	Engineering Application Ability - Application of established engineering methods to complex engineering problem solving: Identifies, discerns and characterises salient issues, determines and analyses causes and effects, justifies and applies appropriate simplifying assumptions, predicts performance and behaviour, synthesises solution strategies and develops substantiated conclusions.
2.1.b	Engineering Application Ability - Application of established engineering methods to complex engineering problem solving: Ensures that all aspects of an engineering activity are soundly based on fundamental principles - by diagnosing, and taking appropriate action with data, calculations, results, proposals, processes, practices, and documented information that may be ill-founded, illogical, erroneous, unreliable or unrealistic.
2.4.b	Engineering Application Ability - Application of systematic approaches to the conduct and management of engineering projects: Seeks out the requirements and associated resources and realistically assesses the scope, dimensions, scale of effort and indicative costs of a complex engineering project.
2.4.d	Engineering Application Ability - Application of systematic approaches to the conduct and management of engineering projects: Proficiently applies basic systems engineering and/or project management tools and processes to the planning and execution of project work, targeting the delivery of a significant outcome to a professional standard.
2.4.e	Engineering Application Ability - Application of systematic approaches to the conduct and management of engineering projects: Is aware of the need to plan and quantify performance over the full life-cycle of a project, managing engineering performance within the overall implementation context.
2.4.a	Engineering Application Ability - Application of systematic approaches to the conduct and management of engineering projects: Contributes to and/or manages complex engineering project activity, as a member and/or as the leader of an engineering team.
2.1.f	Engineering Application Ability - Application of established engineering methods to complex engineering problem solving: Conceptualises alternative engineering approaches and evaluates potential outcomes against appropriate criteria to justify an optimal solution choice.
2.2.j	Engineering Application Ability - Fluent application of engineering techniques, tools and resources: Understands the role of quality management systems, tools and processes within a culture of continuous improvement.
2.1	Engineering Application Ability: Application of established engineering methods to complex engineering problem solving.
2.2	Engineering Application Ability: Fluent application of engineering techniques, tools and resources.
2.4	Engineering Application Ability: Application of systematic approaches to the conduct and management of engineering projects.
3	Elements of competency: Professional and Personal Attributes
3.5.a	Professional and Personal Attributes - Orderly management of self, and professional conduct: Demonstrates commitment to critical self-review and performance evaluation against appropriate criteria as a primary means of tracking personal development needs and achievements
3.5.c	Professional and Personal Attributes - Orderly management of self, and professional conduct: Demonstrates commitment to life-long learning and professional development.

CODE	COMPETENCY
3.5.d	Professional and Personal Attributes - Orderly management of self, and professional conduct: Manages time and processes effectively, prioritises competing demands to achieve personal, career and organisational goals and objectives.
3.5.e	Professional and Personal Attributes - Orderly management of self, and professional conduct: Thinks critically and applies an appropriate balance of logic and intellectual criteria to analysis, judgement and decision making.
3.6.b	Professional and Personal Attributes - Effective team membership and team leadership: Functions as an effective member or leader of diverse engineering teams, including those with multi-level, multi-disciplinary and multi-cultural dimensions.
3.1.c	Professional and Personal Attributes - Ethical conduct and professional accountability: Understands the accountabilities of the professional engineer and the broader engineering team for the safety of other people and for protection of the environment.
3.1	Professional and Personal Attributes: Ethical conduct and professional accountability.
3.5	Professional and Personal Attributes: Orderly management of self, and professional conduct.
3.6	Professional and Personal Attributes: Effective team membership and team leadership.

5. Am I eligible to enrol in this course?

Refer to the UniSC Glossary of terms for definitions of "pre-requisites, co-requisites and anti-requisites".

5.1. Pre-requisites

Enrolled in GC002, GD002, MC002, GC003, GD003, MC003, GC004, GD004, MC004, GC005, GD005, MC005, GC006, GD006 or MC006.

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

Not applicable

5.4. Specific assumed prior knowledge and skills (where applicable)

Not applicable

5.5. Microcredential Information

Not applicable

6. How am I going to be assessed?

6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

6.2. Details of early feedback on progress

Early feedback will be provided through completion of weekly activities in workshops. Furthermore, feedback on each assessment will be provided which will be used to help with the following assessment.

6.3. Assessment tasks

DELIVERY MODE	TASK NO.	ASSESSMENT PRODUCT	INDIVIDUAL OR GROUP	WEIGHTING %	WHAT IS THE DURATION / LENGTH?	WHEN SHOULD I SUBMIT?	WHERE SHOULD I SUBMIT IT?
All	1	Report	Group	45%	2000 words	Week 7	Online Assignment Submission with plagiarism check
All	2	Oral	Group	30%	10 minutes	Week 10	Online Assignment Submission with plagiarism check
All	3	Report	Group	25%	3000 words	Exam Period	Online Assignment Submission with plagiarism check

All - Assessment Task 1: Report

GOAL:	Produce draft plan for final report
PRODUCT:	Report
AUTHORSHIP STATEMENT:	
FORMAT:	Intermediate team based development of a project plan focusing upon a relevant engineering task. This will be presented as a draft report mid way through the study period.
CRITERIA:	

No.		Learning Outcome assessed
1	Evaluation of alternative approaches to managing projects and identification of optimal solutions to meet complex contextual demands in different sectors	2
2	Application of project management tools and processes to the scoping, planning and execution of an engineering project and monitoring of progress and performance.	3
3	Judgement of key issues in management systems and control with regard to quality management and WHS.	5
4	Examination of modern project management theory and demonstration of relevant practice techniques.	1
5	Evaluation of social, environmental, and economic principles, norms and accountabilities of sustainable engineering practice in engineering project management.	6

GENERIC SKILLS:	Collaboration, Organisation

All - Assessment Task 2: Oral Presentation

GOAL:	Communicate group project plan.
PRODUCT:	Oral
AUTHORSHIP STATEMENT:	
FORMAT:	Final plan for the group project.

CRITERIA:

No.		Learning Outcome assessed
1	Evaluation of alternative approaches to managing projects and identification of optimal solutions to meet complex contextual demands in different sectors.	2
2	Application of project management tools and processes to the scoping, planning and execution of an engineering project and monitoring of progress and performance.	3
3	Judgement of key issues in management systems and control with regard to quality management and WHS.	5
4	Examination of modern project management theory and demonstration of relevant practice techniques.	1
5	Evaluation of social, environmental, and economic principles, norms and accountabilities of sustainable engineering practice in engineering project management.	6

GENERIC SKILLS:	Communication, Collaboration

All - Assessment Task 3: Report

GOAL:	Demonstrate project management techniques.
PRODUCT:	Report
AUTHORSHIP STATEMENT:	
FORMAT:	Group report demonstrating project management techniques.

CRITERIA:

No.		Learning Outcome assessed
1	Evaluation of alternative approaches to managing projects and identification of optimal solutions to meet complex contextual demands in different sectors.	2
2	Application of project management tools and processes to the scoping, planning and execution of an engineering project and monitoring of progress and performance.	3
3	Application of acquisition strategies and constructive par in the selection of consultants, contractors and resources.	4
4	Judgement of key issues in management systems and control with regard to quality management and WHS.	5
5	Examination of modern project management theory and demonstration of relevant practice techniques.	1
6	Evaluation of social, environmental, and economic principles, norms and accountabilities of sustainable engineering practice in engineering project management.	6

GENERIC SKILLS:	Collaboration, Organisation

7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Student workload is calculated at 12.5 learning hours per one unit.

8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Canvas site– Please log in as soon as possible.

8.1. Prescribed text(s) or course reader

There are no required/recommended resources for this course.

8.2. Specific requirements

Not applicable

9. How are risks managed in this course?

Risk assessments have been performed for all studio and laboratory classes and a low level of health and safety risk exists. Some risk concerns may include equipment, instruments, and tools; as well as manual handling items within the laboratory. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the online induction training for students, and following the instructions of the University staff.

10. What administrative information is relevant to this course?

10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

10.2. Assessment: Additional Requirements

Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:
(a) The final mark is in the percentage range 47% to 49.4%; and
(b) The course is graded using the Standard Grading scale

Eligibility for Supplementary Assessment Your eligibility for supplementary assessment in a course is dependent of the following conditions applying: - The final mark is in the percentage range 47% to 49.4% - The course is graded using the Standard Grading scale - You have not failed an assessment task in the course due to academic misconduct

10.3. Assessment: Submission penalties

Late submissions may be penalised up to and including the following maximum percentage of the assessment task's identified value, with weekdays and weekends included in the calculation of days late:
(a) One day: deduct 5%;
(b) Two days: deduct 10%;
(c) Three days: deduct 20%;
(d) Four days: deduct 40%;
(e) Five days: deduct 60%;
(f) Six days: deduct 80%;
(g) Seven days: A result of zero is awarded for the assessment task.

The following penalties will apply for a late submission for an online examination:
Less than 15 minutes: No penalty
From 15 minutes to 30 minutes: 20% penalty
More than 30 minutes: 100% penalty

10.4. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching

10.5. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The Student Charter sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

10.6. General Enquiries

For course-specific questions, contact your teaching staff or Course Coordinator.

For other enquiries or to access support, please contact Student Central:

- UniSC Student Central
- UniSC Adelaide Student Central