UniSC

COURSE OUTLINE

ENG700 Integrative Group Project

School: School of Science, Technology and Engineering

2026 | Trimester 2

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 usc.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 is designed to enable you to develop and demonstrate advanced teamwork, design and analysis skills. A topical and challenging project will be selected from a larger pool of proposals by each of the teams of multi-disciplinary engineers.

The course will simulate an engineering working environment with teams reporting progress at regular intervals to the course coordinator, who will assume the role of project manager.

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:

- Define the desired outcome for the project and develop an appropriate plan of work and approach
- Undertake an initial scoping review of the market
- Identification of appropriate analysis techniques
- Undertake a risk assessement where appropriate
- Undertake a review of any ethical considerations
- Assignment of roles and responsibilities
- Planning
- Progress and final reporting

2. What level is this course?

700 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 Identify the structure, roles and capabilities of the multi-disciplinary engineering team and assign roles and responsibilities accordingly.	Knowledgeable Engaged	1, 1.5.f, 1.5, 3, 3.1.a, 3.5.a, 3.6.a, 3.6.b, 3.6.c, 3.6.e, 3.1, 3.5, 3.6
2 Evaluate the feasibility, scope, and potential impact of alternative approaches to conduct the multi-disciplinary research project and justify the best solution.	Creative and critical thinker	2, 2.1.f, 2.4.b, 2.4.d, 2.1, 2.4
3 Critically review and consider the accountabilities of the professional engineer and the project team for the safety of team members, other people and for protection of the environment throughout the project.	Creative and critical thinker Engaged Sustainability-focussed	1, 1.6.b, 1.6.c, 1.6.e, 1.6, 2, 2.3.b, 2.3, 3, 3.1.c, 3.3.a, 3.5.b, 3.6.a, 3.3, 3.5, 3.6
4 Identify and apply the most suitable project management, materials, methods, and data collection techniques for the collaborative research project and integrate these elements into the project design.	Empowered	2, 2.2.a, 2.4.a, 2.4.b, 2.4.d, 2.2, 2.4
5 Apply understanding of team dynamics and leadership within multi-disciplinary engineering team to coordinate tasks within the team and evaluate alternative viewpoints to achieve project goals.	Empowered Engaged	3, 3.6.a, 3.6.b, 3.6.d, 3.6
6 Identify and address potential ethical dilemmas, ensuring the project adheres to professional and ethical standards.	Ethical	3, 3.1.a, 3.1.c, 3.1

* Competencies by Professional Body

CODE	COMPETENCY
ENGINEERS AUSTRALIA STAGE 1 PROFESSIONAL ENGINEER COMPETENCY STANDARDS	
1	Elements of competency: Knowledge and Skill Base
1.5.f	Knowledge and Skill Base - Knowledge of engineering design practice and contextual factors impacting the engineering discipline: Identifies the structure, roles and capabilities of the engineering workforce.
1.6.b	Knowledge and Skill Base - Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline: Appreciates the principles of safety engineering, risk management and the health and safety responsibilities of the professional engineer, including legislative requirements applicable to the engineering discipline.

CODE	COMPETENCY
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.
1.5	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.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.
2.4.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.
2.3.b	Engineering Application Ability - Application of systematic engineering synthesis and design processes: Addresses broad contextual constraints such as social, cultural, environmental, commercial, legal political and human factors, as well as health, safety and sustainability imperatives as an integral part of the design process.
2.2.a	Engineering Application Ability - Fluent application of engineering techniques, tools and resources: Proficiently identifies, selects and applies the materials, components, devices, systems, processes, resources, plant and equipment relevant to the engineering discipline.
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	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.
2.3	Engineering Application Ability: Application of systematic engineering synthesis and design processes.
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
3.1.a	Professional and Personal Attributes - Ethical conduct and professional accountability: Demonstrates commitment to uphold the Engineers Australia - Code of Ethics, and established norms of professional conduct pertinent to the engineering discipline.
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
3.6.a	Professional and Personal Attributes - Effective team membership and team leadership: Understands the fundamentals of team dynamics and leadership.
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.
3.6.c	Professional and Personal Attributes - Effective team membership and team leadership: Earns the trust and confidence of colleagues through competent and timely completion of tasks.
3.6.e	Professional and Personal Attributes - Effective team membership and team leadership: Confidently pursues and discerns expert assistance and professional advice.

CODE	COMPETENCY
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.
3.3.a	Professional and Personal Attributes - Creative, innovative and pro-active demeanour: Applies creative approaches to identify and develop alternative concepts, solutions and procedures, appropriately challenges engineering practices from technical and non-technical viewpoints; identifies new technological opportunities.
3.5.b	Professional and Personal Attributes - Orderly management of self, and professional conduct: Understands the importance of being a member of a professional and intellectual community, learning from its knowledge and standards, and contributing to their maintenance and advancement.
3.6.d	Professional and Personal Attributes - Effective team membership and team leadership: Recognises the value of alternative and diverse viewpoints, scholarly advice and the importance of professional networking.
3.1	Professional and Personal Attributes: Ethical conduct and professional accountability.
3.3	Professional and Personal Attributes: Creative, innovative and pro-active demeanour.
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

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	2	Oral	Individual	30%	15 minutes	Week 10	Online Assignment Submission with plagiarism check
All	3	Report	Individual	45%	5000 words	Week 12	Online Assignment Submission with plagiarism check

All - Assessment Task 2: Presentation

GOAL:	Final solution for the group project delivered through a presentation.
PRODUCT:	Oral
FORMAT:	Oral presentation of group project.

CRITERIA:	No.		Learning Outcome assessed
	1	Evaluation of feasibility, scope, and potential impact of alternative approaches to conduct the multi-disciplinary research project and justification of best solution.	2
	2	Identification and application of most suitable project management, materials, methods, and data collection techniques for the collaborative research project and integration of these elements into the project design.	4
	3	Application of understanding of team dynamics and leadership within multi-disciplinary engineering team to coordinate tasks within the team and evaluation of alternative viewpoints to achieve project goals.	5
	4	Identification of potential ethical dilemmas, ensuring project adherence to professional and ethical standards.	6
GENERIC SKILLS:	Communication, Collaboration, Problem solving		

All - Assessment Task 3: Report

GOAL:	Group report evaluating and justifying the proposed solution to the selected engineering problem.
PRODUCT:	Report
FORMAT:	Written report.

CRITERIA:	No.		Learning Outcome assessed
	1	Evaluation of feasibility, scope, and potential impact of alternative approaches to conduct the multi-disciplinary research project and justification of best solution.	2
	2	Identification and application of most suitable project management, materials, methods, and data collection techniques for the collaborative research project and integration of these elements into the project design.	4
	3	Application of understanding of team dynamics and leadership within multi-disciplinary engineering team to coordinate tasks within the team and evaluation of alternative viewpoints to achieve project goals.	5
	4	Identification of potential ethical dilemmas, ensuring project adherence to professional and ethical standards.	6
	5	Identification of structure, roles and capabilities of the multi-disciplinary engineering team and assignment of roles and responsibilities accordingly.	1
	6	Critical review and consideration of the accountabilities of the professional engineer and the project team for the safety of team members, other people and for protection of the environment throughout the project.	3
GENERIC SKILLS:	Communication, Collaboration, Problem solving, 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

N/A

9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety 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

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. SafeUniSC

UniSC is committed to a culture of respect and providing a safe and supportive environment for all members of our community. For immediate assistance on campus contact SafeUniSC by phone: 07 5430 1168 or using the SafeZone app. For general enquires contact the SafeUniSC team by phone 07 5456 3864 or email safe@usc.edu.au.

The SafeUniSC Specialist Service is a Student Wellbeing service that provides free and confidential support to students who may have experienced or observed behaviour that could cause fear, offence or trauma. To contact the service call 07 5430 1226 or email studentwellbeing@usc.edu.au.

10.5. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the Learning Advisers web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or studentcentral@usc.edu.au.

10.6. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to Student Hub, email studentwellbeing@usc.edu.au or call 07 5430 1226.

10.7. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, AccessAbility Services can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to Student Hub, email AccessAbility@usc.edu.au or call 07 5430 2890.

10.8. 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

10.9. 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.

10.10. General Enquiries

In person:

- **UniSC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **UniSC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **UniSC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **UniSC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **UniSC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **UniSC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

Tel: +61 7 5430 2890

Email: studentcentral@usc.edu.au