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C O U R S E   O U T L I N E

CSC100 Computer Science Project and Ethics

School: School of Science, Technology and Engineering

2023 | Semester 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.

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 immerses you in the field of Computer Science (CS), through an industry-like team environment that will encourage active application of major CS topics including ethics, project management, systems design, UML, databases, computer organisation, operating systems, algorithms, cybersecurity, artificial intelligence, and boolean logic and algebra. By providing a high-level picture of the CS industry, this course gives a taste of what you can expect to encounter throughout your Computer Science degree and beyond.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Seminar – Whole of course meeting	1hr	Week 1	4 times
Learning materials – Asynchronous online learning materials	2hrs	Week 1	13 times
Tutorial/Workshop 1 – On-campus Theory workshop	1hr	Week 1	10 times
Tutorial/Workshop 2 – On-campus Computer Workshop - project	2hrs	Week 4	9 times

1.3. Course Topics

- Introduction to course/topic overview, Introduction to Ethics, Introduction to group Dynamics
- Social and Ethical Issues; User-Centered Design and implications
- Software Development methods
- Computer organisation and operating systems
- System Specification and design; UML and Modelling
- History and Structure of Programming Languages; Software Engineering
- Pseudocode, APIs and Algorithms; Theory of Computation
- Data, Boolean Logic and Algebra, Data Structures
- Database Design, Development and Integration
- Systems Integration and Testing
- Artificial Intelligence
- Cyber Security Basics
- Future CS Trends: Cloud & Mobile, Wearable Technology & Internet of Things; Course Summary

2. What level is this course?

> 100 Level (Introductory)

Engaging with discipline knowledge and skills at foundational level, broad application of knowledge and skills in familiar contexts and with support. Limited or no prerequisites. Normally, associated with the first full-time study year of an undergraduate program.

3. What is the unit value of this course?

> 12 units

4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES	GRADUATE QUALITIES
On successful completion of this course, you should be able to...	Completing these tasks successfully will contribute to you becoming...
1 Demonstrate knowledge of computing fundamentals.	Knowledgeable
2 Design solutions to computing problems.	Creative and critical thinker
3 Work as part of a team to communicate computing activities through a written specification, design and implementation report.	Engaged
4 Demonstrate an appreciation of the impact of computing in a range of settings.	Sustainability-focussed
5 Demonstrate an understanding of ethical issues in computing and cultural considerations in the production of computer applications.	Ethical

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

> ICT112

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

Weekly tutorial assessments in Task 1 will provide students with summative feedback weekly from weeks 1 – 10. Additionally, the group assessment in Task 2 will be designed to have regular formative feedback milestones that students are encouraged to submit their work. students are encouraged to submit their work.

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	Portfolio	Individual	25%	Weeks 1 -10, 1000 words	Throughout teaching period (refer to Format)	Online Assignment Submission with plagiarism check
All	2	Case Study	Individual	40%	1500 words	Week 11	Online Assignment Submission with plagiarism check
All	3	Oral and Written Piece	Group	35%	2000 words each including programming Team presentations of 5 - 10 minutes	Refer to Format	Online Assignment Submission with plagiarism check

All - Assessment Task 1: Portfolio The WIRED world

GOAL:	This portfolio task will develop your appreciation of the complexities and ethical nuances that emerge in computer science. You will apply course theoretical and practical computing fundamentals and processes to everyday computer science issues.
PRODUCT:	Portfolio
FORMAT:	Submit: Weekly in tutorial. You will submit weekly responses to stimulus materials provided in the Canvas Learning Materials. The portfolio will then be marked based on completion and a final reflection of this portfolio based on the stated criteria.

CRITERIA:	No.		Learning Outcome assessed
	1	Completeness of portfolio	2
	2	Quality and accuracy of developed solutions or process applications	1 2
	3	Creativity and innovation of responses	1 2
	4	Application of fundamental CS theory to a problem	1 2
	5	Depth and breadth of ethical and sustainability considerations	5

All - Assessment Task 2: Case Study Ethics

GOAL:	You will explore a specific ethical case study and demonstrate an understanding of ethical and societal considerations for computer science design and development.
PRODUCT:	Case Study
FORMAT:	Academic product Individual 1500 words Written report on identified case study of societal and ethical significance. Topics will be available in the Task 3 Assessment folder.

CRITERIA:	No.		Learning Outcome assessed
	1	Depth of interpretation, justification and analysis of the case study both ethically and in relation to societal considerations presented during the course.	② ④ ⑤
	2	Accuracy of identified recommendation	① ② ④ ⑤
	3	Evidence of depth and breadth of research including related cases, ethical frameworks and associated literature cited within report and in reference list.	① ② ④ ⑤

All - Assessment Task 3: Group Design and Programming Assignment

GOAL:	This is an industry-based simulation task to immerse you into a CS industry environment. You will work in a team through a guided development process developing a group-based computing application, from beginning to end. You will be responsible for specific elements of this project and will be assessed based on specific contributions to the team and collaboration skills.
PRODUCT:	Oral and Written Piece
FORMAT:	Submit: Final Due Exam block, Formative Milestones as Advised on Canvas.

Professional product

Group assessment: approximately 5000-7000 words + Oral presentation 10 minutes total for whole team including code

Oral, Report and Application program.

The group will create a set of team management procedures and processes, system specifications and design document, and project implementation for a provided stakeholder description. |

CRITERIA:	No.		Learning Outcome assessed
	1	Peer assessment of team performance	③
	2	Depth and breadth of innovation and creativity for design and specification	② ④ ⑤
	3	Accuracy of mapping from established design to implemented product.	①
	4	Justification of decisions made relating to societal impact and ethical considerations.	⑤
	5	Organisation: meeting formative milestones throughout the course	① ② ③
	6	Quality of finished product	① ② ③ ④ ⑤

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

Please note that you need to have regular access to the resource(s) listed below. Resources may be required or recommended.

REQUIRED?	AUTHOR	YEAR	TITLE	EDITION	PUBLISHER
Recommended	Behrouz Forouzan	2018	Foundations of Computer Science	4th Edition	n/a
Recommended	George Reynolds	2018	Ethics in Information Technology	6th Edition	Cengage Learning
Recommended	Kathy Schwalbe	2018	Information Technology Project Management	9th Edition	Cengage Learning

8.2. Specific requirements

Access to computer.

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:

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 submission of assessment tasks may be penalised at the following maximum rate:
- 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.
- 10% (of the assessment task's identified value) for the third day - 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.
- A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task. Weekdays and weekends are included in the calculation of days late. To request an extension you must contact your course coordinator to negotiate an outcome.

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