

**ICT310 Systems Analysis and Design****School:** School of Science, Technology and Engineering

2024 | Semester 1

UniSC Sunshine Coast

**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.

*Please go to [usc.edu.au](http://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 advanced course introduces you to a range of concepts used in the analysis and design of complex information systems. You will gain practical skills in modelling systems from the process and object perspectives as well as an understanding of the approaches that can be used when undertaking a holistic analysis and design project.

**1.2. How will this course be delivered?**

| ACTIVITY  | HOURS | BEGINNING WEEK | FREQUENCY |
|---|-------|----------------|-----------|
| <b>BLENDED LEARNING</b>   |       |                |           |
| <b>Online</b> – Pre-recorded concept videos and associated activity | 1hr   | Week 1         | 12 times  |
| <b>Tutorial/Workshop 1</b> – In-class tutorial                      | 2hrs  | Week 2         | 11 times  |
| <b>ONLINE</b>   |       |                |           |
| <b>Online</b> – Pre-recorded concept videos and associated activity | 1hr   | Week 1         | 12 times  |
| <b>Tutorial/Workshop 1</b> – Interactive zoom tutorial              | 2hrs  | Week 2         | 11 times  |

### 1.3. Course Topics

System Modelling  
Requirements Gathering Use Cases  
Use Cases  
Domain modelling  
Extending the requirements model  
Design and design activities  
Designing the graphical user interface  
Approaches to System analysis and Design  
Object Oriented design principles  
Implementing the system

## 2. What level is this course?

300 Level (Graduate)

Demonstrating coherence and breadth or depth of knowledge and skills. Independent application of knowledge and skills in unfamiliar contexts. Meeting professional requirements and AQF descriptors for the degree. May require pre-requisites where discipline specific introductory or developing knowledge or skills is necessary. Normally undertaken in the third or fourth 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 advanced system analysis and design using structured and object-oriented approaches.             | Knowledgeable<br>Engaged   |
| 2   | Test, analyse and justify the selection of the most appropriate system development approach for the project. | Creative and critical thinker  |
| 3   | Communicate a clear, coherent and independent exposition of systems analysis and design.                     | Empowered  |

## 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

ICT115 or ICT221

### 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

The Task 1 mid semester exam (and preparation leading up to the exam) is designed to help students develop skills they will require to complete Tasks 2 and 3.

### 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        | Examination - not Centrally Scheduled | Individual          | 15%         | 50 minutes                     | Week 5                | In Class   |
| All           | 2        | Report                                | Individual          | 35%         | 2,000 words                    | Week 12               | Online Assignment Submission with plagiarism check |
| All           | 3        | Examination - Centrally Scheduled     | Individual          | 50%         | 2 hours                        | Exam Period           | Exam Venue   |

#### All - Assessment Task 1: Mid semester examination

|                  |  |  |  |  |  |  |                                  |
|------------------|--|--|--|--|--|--|----------------------------------|
| <b>GOAL:</b>     | You will demonstrate your cognitive and technical skills in systems analysis and design.   |  |  |  |  |  |                                  |
| <b>PRODUCT:</b>  | Examination - not Centrally Scheduled  |  |  |  |  |  |                                  |
| <b>FORMAT:</b>   | A fifty-minute closed book examination held in week 5, comprising questions from the information obtained during the computer workshop activities, lecture material and additional readings specified during the lecture series. |  |  |  |  |  |                                  |
| <b>CRITERIA:</b> | <b>No.</b>   |  |  |  |  |  | <b>Learning Outcome assessed</b> |
|                  | 1  | Fifty-minute closed book examination comprising questions from the information obtained during the computer workshop activities, lecture material and additional readings specified during the lecture series. |  |  |  |  |                                  |
|                  | 2  | Assessment criteria are mapped to the course learning outcomes.  |  |  |  |  | 1 2 3                            |

#### All - Assessment Task 2: Written report

|                 |   |  |  |  |  |  |  |
|-----------------|---|--|--|--|--|--|--|
| <b>GOAL:</b>    | You will demonstrate your cognitive and technical skills in object-oriented analysis and design of systemsThis task is being used for measuring assurance of learning towards Association to Advance Collegiate Schools of Business (AACSB) accreditation. The following Program Learning Objectives will be assessed:Program Learning Objective 3.1 - Demonstrate critical and creative thinking to identify and solve business problems and arrive at innovative solutions. |  |  |  |  |  |  |
| <b>PRODUCT:</b> | Report  |  |  |  |  |  |  |
| <b>FORMAT:</b>  | You are to write a report that includes an outline of systems requirements for an information systems solution to a business case study. This report will discuss methodologies and include models of the solution using Unified Modelling Language (UML).  |  |  |  |  |  |  |

| CRITERIA: | No. | Learning Outcome assessed   |
|-----------|-----|---|
|           | 1   | Demonstrate knowledge of problem-solving and/or analytical processes appropriate to systems analysis and design                     |
|           | 2   | Demonstrate an understanding of the decision-making process and recognise any cognitive biases that may occur when making decisions |
|           | 3   | Identify and critically analyse pertinent issues in a business context  |
|           | 4   | Critically analyse existing sources of secondary data and literature in the field   |
|           | 5   | Utilise creative, reflective and critical thinking to develop, evaluate and justify innovative solutions to business case study     |

#### All - Assessment Task 3: Final examination

| GOAL:     | You will reflect on what you have learned from assessment tasks 1 and 2   |     |                           |   |  |
|-----------|---|-----|---------------------------|---|--|
| PRODUCT:  | Examination - Centrally Scheduled   |     |                           |   |  |
| FORMAT:   | The final two (2) hour exam will be conducted at the end of the semester at a time and place to be announced by Student Administration.   |     |                           |   |  |
| CRITERIA: | <table> <tr> <th>No.</th><th>Learning Outcome assessed</th></tr> <tr> <td>1</td><td>Two hour closed book examination comprising questions from the information obtained during the computer workshop activities, lecture material and additional readings specified during the lecture series.</td></tr> </table> | No. | Learning Outcome assessed | 1 | Two hour closed book examination comprising questions from the information obtained during the computer workshop activities, lecture material and additional readings specified during the lecture series. |
| No.       | Learning Outcome assessed   |     |                           |   |  |
| 1         | Two hour closed book examination comprising questions from the information obtained during the computer workshop activities, lecture material and additional readings specified during the lecture series.  |     |                           |   |  |

## 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         |
|-----------|--------------------------------------|------|---|--------------------------------|-------------------|
| Required  | Summers, J & Smith, B.               | 2009 | Communication Skills Handbook: How to succeed in written and oral communication | *Later editions are acceptable | Wiley, Singapore* |
| Required  | Satzinger, JW, Jackson, RB & Burd SD | 2016 | Systems Analysis and Design: in a changing world                                | 7th edn                        | Course Technology |

### 8.2. Specific requirements

Not applicable

## 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](tel:0754301168) or using the [SafeZone](#) app. For general enquires contact the SafeUniSC team by phone [07 5456 3864](tel:0754563864) or email [safe@usc.edu.au](mailto: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](tel:0754301226) or email [studentwellbeing@usc.edu.au](mailto: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](mailto: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](mailto: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](mailto: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](mailto:studentcentral@usc.edu.au)