UniSC

COURSE OUTLINE

ICT704 Databases

School: School of Science, Technology and Engineering

2026 | Trimester 1

UniSC Sunshine Coast UniSC Adelaide	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

Modern day computer systems capture, store and manipulate very large amounts of data, which cannot be adequately stored in traditional relational databases. This course covers the different types of databases available, the type of data that is stored and manipulated by them and which database technology is best to suited to different real-world data problems.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – Asynchronous learning material	2hrs	Week 1	12 times
Tutorial/Workshop 1 – Synchronous on campus workshop	2hrs	Week 1	12 times
Seminar – On campus seminar	1hr	Week 2	2 times
ONLINE			
Learning materials – Asynchronous learning material	2hrs	Week 1	12 times
Tutorial/Workshop 1 – Synchronous Zoom workshop	2hrs	Week 1	12 times
Seminar – Online seminar	1hr	Week 2	2 times

1.3. Course Topics

Database systems

Data modelling

SQL

Big data and NoSQL

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 Completing these tasks successfully will contribute to you becoming...
1 Design and implement a database system in a real-world context.	Knowledgeable Creative and critical thinker
2 Reflect critically on the ethical and sustainability impact of appropriate data storage and manipulation.	Ethical Sustainability-focussed
3 Demonstrate mastery of the theory and practice of database systems.	Knowledgeable Engaged
4 Collaborate in a team to design and implement a non-relational database system in real-world data storage context	Engaged

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

ICT701

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

Formative feedback provided on weekly tutorial exercises. Each week's task builds on skills which are used in all assessment pieces.

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	10%	1 hour	Week 4	Online Test (Quiz)
All	2	Examination - not Centrally Scheduled	Individual	40%	1.5 hours	Week 8	Online Assignment Submission with plagiarism check
All	3	Artefact - Technical and Scientific, and Written Piece	Group	50%	1500 words plus code	Week 12	Online Assignment Submission with plagiarism check

All - Assessment Task 1: Database Management Test

GOAL:	To demonstrate mastery of core data management concepts, data services, and demonstrating proficiency in implementing and managing data solutions.
PRODUCT:	Examination - not Centrally Scheduled
FORMAT:	A 1 hour online proctored exam held during your regular week 4 workshop

CRITERIA:	No.		**Learning Outcome assessed**
	1	Application of database design theory	3
	2	Correct application of solutions to given scenarios	3
GENERIC SKILLS:			

All - Assessment Task 2: Relational Database Exam

GOAL:	To demonstrate the mastery the theory and practice of relational databases
PRODUCT:	Examination - not Centrally Scheduled
FORMAT:	Individual exam held during your regular week 8 workshop. Submitted via Canvas

CRITERIA:	No.		**Learning Outcome assessed**
	1	Application of database skills	3
	2	Insightful problem solving to identify correct solutions to given scenarios	3
GENERIC SKILLS:			

All - Assessment Task 3: Non-Relational Database Group Project

GOAL:	To collaboratively design and implement a non-relational database system that effectively addresses a real-world data storage and manipulation challenge, ensuring scalability, flexibility, and efficiency.
PRODUCT:	Artefact - Technical and Scientific, and Written Piece
FORMAT:	A functional database and comprehensive report analysing and providing solutions to the prescribed real-world situation. Additional documentation should include all relevant coding, group meeting minutes and contract. Further specifications will be provided on Canvas.

CRITERIA:	No.		**Learning Outcome assessed**
	1	Insightful analysis of the given problem	1
	2	Completeness and accuracy of the design and implementation of the database system	3
	3	Contribution to the team in the design and implementation of the system	4
	4	Reflection on the ethical and sustainability impact of the database design choices made	2
GENERIC SKILLS:			

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	CARLOS. MORRIS CORONEL (STEVEN. CROCKETT, KEELEY.)	0	DATABASE PRINCIPLES	3rd Edition	Cengage

8.2. Specific requirements

You must have a computer (Desktop or Laptop) that you can install/access software applications on, in order to be able to practice the skills outside lecture and workshop times.

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

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