WISY114

Introduction to Database Design and Management

MUIC Term 3 2016

Macquarie University International College

Contents

General Information

Unit convenor and teaching staff
Teacher
Charanya Ramakrishnan
charanya.ramakrishnan@mq.edu.au
Contact via Email

Credit points
3

Prerequisites

Corequisites

Co-badged status

Unit description
This unit introduces students to the principles and concepts of data storage, management and modelling, including the role of data and information in organisations. The unit will cover conceptual modelling techniques, converting conceptual data models into relational data models and verifying its structural characteristics with nomalisation techniques, and implementing and utlising a relational database using a database-management system. Fundamental data modelling tools, techniques and query languages such as Structured Query Language (SQL) will be used. Ethical and green approaches to the collection, backup, use and storage of data and the construction of systems are emphasised. An introduction to the concepts and issues relating to data warehousing, governance, administration, security and privacy and alternative database structures such as distributed and object oriented databases will be provided. The unit concentrates upon building a firm foundation in information representation, organisation and storage with particular emphasis upon the application of database systems.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

Analyse data requirements and design and develop conceptual database models.
Implement system models into databases, design and create simple databases for business information systems and write programs to produce interactive queries.

Explain the role and nature of ethics and sustainability in the IT environment.
Use data analysis and data modelling techniques and tools for introductory level database design and specification
Use discipline specific terminology to communicate concepts and ideas relevant to this unit.

General Assessment Information

A more detailed description of each task is given below.

Weekly Submissions

Each week, a set of exercises will be made available online. All the questions will be discussed during your class. You are expected to submit answers to the online question(s) on iLearn before 9 am on the Monday of the following week. Your submission will be marked by your teacher (out of 4 marks). There will be 5 exercises worth 2% each.

Assignments

There are 3 assignments.

1. The first assignment requires you to apply and develop your understanding of data modeling concepts and submit a professionally presented document demonstrating the use of data modeling skills. The document must be prepared using a standard word processor such as Word and diagrams should be created using a CASE tool such as Power Designer.
2. The second assignment assesses your ability to design a database and provide interactive queries.
3. The third assignment requires you to work in pairs to research a given database-related topic and present your findings to the class.

The first two will be submitted and marked online. The third assignment will be marked in class by your teacher.

You are encouraged to:

- set your personal deadline earlier than the actual one;
- keep backups of all your important files;
- make sure that no-one else picks up your printouts.

If you cannot submit on time because of illness or other circumstances you will need to lodge a disruptions to studies notification.

Final Examination

End of unit three hour written examination is to be taken during the MUIC Examination period.

The examination will cover material drawn from all parts of the unit's subject matter and will consist of multiple choice questions and short answer questions. The purpose of the final exam is to give you the opportunity to demonstrate your knowledge of designing databases, writing SQL queries and other associated database concepts.The final examination accounts for 45% of the final mark.

All students who successfully apply for and are granted special consideration (see the Disruption to Studies Policy below) in relation to the final exam will be required to sit a supplementary examination. Please note that the supplementary examination, held during the MUIC supplementary exam period, may have a different format to the original exam. Please consult MUIC for advice on the Disruptions to Studies Policy.

Standards

Four standards, namely Developing, Functional, Proficient, and Advanced, summarize as many different levels of achievement. Each standard is precisely defined to help students know what kind of performance is expected to deserve a certain grade. Typically, Developing corresponds PC, Functional is for P, Proficient for Cr, and Advanced covers D and HD. The standards corresponding to the learning outcomes and criteria of this unit are given below:

	Standards			
Criteria for L.O. #1	**Developing**	**Functional**	**Proficient**	**Advanced**
Data Analysis and Modeling	Has limited understanding and ability to apply analysis, modeling and programming concepts and techniques. Assignment and exam performance shows functional level of understanding on some but not all assessment tasks.	Demonstrates knowledge of terms and core concepts. Assignment and exam performance shows basic understanding and ability to apply most of the data modeling and implementation concepts and techniques.	Understands most of the data modelling concepts and can apply them appropriately. Implements most of the tasks specified. Assignment and exam performance shows good understanding of data analysis and modeling concepts and application of these skills in conceptual database design.	Shows depth of understanding of data analysis and modeling concepts and implements all tasks as specified with professional presentation. Assignment and exam performance shows critical thought and comprehension of the software development big picture and related issues and activities.
Criteria for L.O. #2				
Data Base	Inaccurate reproduction of definitions and ideas, show limited understanding of database principles. Able to apply some of the basic database functionality in the assignments and final exam.	Reproduce definitions and ideas, show some breath of understanding of Database principles. Able to apply most of the basic database functionality in the assignments and final exam.	Show breath of understanding of database principles. Able to apply most of database functionality in the assignments and final exam.	Apply terminology and ideas in some new contexts, show some depth of understanding of database principles. Able to apply most of database functionality in the assignments and final exam.

Criteria for L.O. #3				
Ethics	Assessment performance shows limited understanding of what ethics is.	Assessment performance shows an understanding of what ethics involves relating to sustainability and the environment.	Assessment performance shows an appreciation of the impact of ethics on professional practice as well as ethical decision making relating to sustainability and the environment.	Assessment performance shows a deep appreciation of the impact of ethics on professional practice as well as ethical decision making relating to sustainability and the environment.
Criteria for L.O. #4				
Use of modeling tools	Assignment and exam performance shows limited understanding of data analysis and data modelling techniques and tools for introductory level database design and requirements specification.	Assignment and exam performance shows basic understanding and ability to use data analysis and modeling tools.	Assignment and exam performance shows good understanding of data analysis and modeling tools in conceptual database design.	Assignment and exam performance shows depth of understanding of data analysis and modeling tools.

Requirements to Pass

In order to pass this unit a student must:

- Pass the final examination or final assessment task
- Pass (obtain >= 50% of possible marks) in at least two of the three assignments
- Achieve a Standard Numerical Grade (SNG) of 50 or more in the unit
- Attend at least 80% of scheduled classes

For further details about grading, please refer to the Grading Policy.

Submission of Assessment Tasks

Assessments must be submitted based on the instructions provided in your assessment specifications. Assessment tasks which have not been submitted as required will not be marked. They will be considered a non-submission and zero marks will be awarded.

Turnitin

Turnitin compares electronically submitted papers to a database of academic publications, internet sources and other papers that have been submitted into the system to identify matching text. It then produces an Originality Report which identifies text taken from other sources,and generates a similarity percentage to judge whether plagiarism has occurred (see Academic Honesty section below).

Multiple submissions may be possible via Turnitin prior to the due date of an assessment and

originality reports may be made available to students. In such cases they should be used to check work for plagiarism prior to a final submission.

Where there is a requirement for assessment tasks to be submitted through Turnitin, it is the student's responsibility to ensure that work is submitted correctly prior to the due date. Hard copies will not be accepted unless indicated otherwise by a teaching staff member. Records in Turnitin will be taken as records of submission. For assistance submitting through Turnitin, you may approach your teacher, lodge a OneHelp Ticket, refer to the IT help page or seek assistance from Student Connect.

Students should note that for a first time submission the Originality Report will be available immediately post submission but for any subsequent submissions it will take 24 hours for the report to be generated. This may be after the due date so students should plan their submission carefully.

Missed Assessments

The University recognises that students may experience unexpected events and circumstances that adversely affect their academic performance in assessment activities, for example illness. In order to support students who have experienced a serious and unavoidable disruption, the University will provide affected students with an additional opportunity to demonstrate that they have met the learning outcomes of a unit. An additional opportunity provided under such circumstances is referred to as special consideration.

The Disruption to Studies Policy applies only to *serious and unavoidable* disruptions that arise after a study period has commenced. Students with a pre-existing disability/health condition or prolonged adverse circumstances may be eligible for ongoing assistance and support. Such support may be sought through Campus Wellbeing and Support Services.

Serious and Unavoidable Disruption The University classifies a disruption as **serious and unavoidable** if it:

- could not have reasonably been anticipated, avoided or guarded against by the student; and
- was beyond the student's control; and
- caused substantial disruption to the student's capacity for effective study and/or completion of required work; and
- occurred during an event critical study period and was at least three (3) consecutive days duration, and / or
- prevented completion of a final examination.

To be eligible for Special Consideration, a student must notify the University of a *serious and unavoidable* disruption within five (5) working days of the commencement of the disruption (Disruption to Studies notification). All Disruption to Studies notifications are to be made online via the University's Ask MQ system. A Disruption to Studies notification must be supported by documentary evidence.

In submitting a Disruption to Studies notification, a student is acknowledging that they may be required to undertake additional work. The time and date, deadline or format of any required extra assessible work as a result of a disruption to studies notification is not negotiable and in submitting a disruption to studies notification, a student is agreeing to make themselves available to complete any extra work as required.

Please refer to the Disruption to Studies Policy for further details.

Extensions & Late Submissions

To apply for an extension of time for submission of an assessment item, students must submit a Disruptions to Studies notification via ask.mq.edu.au.

Late submissions without an approved extension are possible but will be penalised at 20% per day up to 4 days (weekend inclusive). If a student submits an assessment task 5 or more days after the due date without grounds for special consideration (See Disruptions to Studies Policy) a record or submission will be made but the student will receive zero marks for the assessment task.

Final Examinations and Final Assessment Tasks

Final exams and final assessments will typically take place in Week 6 or Monday of Week 7. All students enrolled in a teaching session are expected to ensure they are available up until and including Monday of Week 7 to undertake examinations. Passing the final exam or final assessment task is a requirement to pass this unit.

Details of teaching session dates can be found on the Important Dates calendar. Due dated for assessments will be available in the unit guide and final examination timetables will be released to students prior to Week 5.

Planning for an exam is very important. All students should be familiar with the Exam Rules. In addition, students should refer to the below links for other important examination related information.

- Talk to your lecturer
- Revision tips
- What to bring with you
- What not to bring with you
- Where to get help
- Tips for Success

It is not uncommon for students to have two examinations in one day.

Conduct During Assessments and Examinations

Students must adhere to the Student Code of Conduct and Academic Honesty Policy at all times.

Students will be provided with instructions relating to conduct during in-class assessment tasks. For all examinations, students will be required to:

- provide photographic proof of identity for the duration of the examination. This must be visible at all times during the examination.
- leave mobile phones, electronic devices, bags, computers, notes, books and similar items outside a final examination venue or in a designated space
- ensure any water brought into the examination room is in a clear and unmarked bottle
- obey all instructions provided by an Examination Supervisor
- refrain from communicating in any way with another student once they have entered the examination venue.

Students are NOT permitted:

- into an examination venue once one hour from the time of commencement (excluding any reading time) has elapsed
- to leave an examination venue *before* one hour from the time of commencement (excluding any reading time) has elapsed
- to be readmitted to an examination venue unless they were under approved supervision during the full period of their absence
- to obtain or attempt to obtain assistance in undertaking or completing the examination script
- to receive or attempt to receive assistance in undertaking or completing the examination script.

Students should also ensure they follow all requirements of the Final Examination Policy.

Supplementary Examinations

Supplementary final examinations are held during the scheduled Supplementary Final exam Period. This may fall in Week 7 or within the first week of the subsequent teaching term. Results for supplementary exams may not be available for up to two weeks following the supplementary examination. Students in their final term of study who undertake supplementary final exams should note that formal completion of their Diploma Program will not be possible until supplementary results are released and this may impact on their ability to enrol in subsequent programs of study on time.

Retention of Originals

It is the responsibility of the student to retain a copy of any work submitted and produce another copy of all work submitted if requested. Copies should be retained until the end of the grade appeal period each term.

In the event that a student is asked to produce another copy of work submitted and is unable to do so, they may be awarded zero (0) for that particular assessment task.

The University may request and retain the originals of any documentation or evidence submitted to support notifications of disruptions to studies. Requests for original documentation will be sent

to the applicant's student email address within six (6) months of notification by the student. Students must retain all original documentation for the duration of this six (6) month period and must supply original documents to the University within ten (10) working days of such a request being made.

Contacting Teaching Staff and Obtaining Help and Feedback

Students may contact teaching staff at any time during the term by using the contact details provided in this guide.

For all university related correspondence, students are required to use their official Macquarie University student email account which may be accessed via the Macquarie University Student Portal. Inquiries from personal email accounts will not be attended to.

The feedback that you receive also plays an important role in your learning. You have many opportunities to seek for and to receive feedback. During lessons, you are encouraged to ask the teacher, questions to clarify anything you might not be sure of. You may also arrange to meet with your teacher. Each week, you will be given activities and problems to solve in the lessons. This will at times involve contributing to a group of students and presenting solutions to the class. The final assignment involves working in pairs and giving a presentation in your lesson(s). The comments and the solutions provided will help you to understand the material in the unit, prepare you for the work in assignments as well as for the final exam. It is important that you keep up with these problems every week. Assignments have been especially designed to deliver continuous feedback on your work. Make sure you read the feedback you are given, attend lessons which provide assignment feedback and compare your solution with sample solutions provided.

Students may seek additional feedback at any time during the term and general feedback about their performance in a unit up to 6 months following results release. It is the student's responsibility to approach teaching staff in a timely manner if they require additional feedback.

Assessment Tasks

Name	Weighting	Due
Assignment 1	18%	Week 3 Friday 5pm
Assignment 2	17%	Week 5 Friday 5pm
Assignment 3	10%	Week 6
Weekly Submissions	10%	Monday 9am from Week 2
Final Exam	45%	MUIC Final Examination Period

Assignment 1

Due: **Week 3 Friday 5pm**
Weighting: **18%**

Database Modelling: This assignment will involve the development of a conceptual, logical and physical data model for a given problem description.

This assignment will be submitted in iLearn and marked online.

On successful completion you will be able to:

- Analyse data requirements and design and develop conceptual database models.
- Use data analysis and data modelling techniques and tools for introductory level database design and specification
- Use discipline specific terminology to communicate concepts and ideas relevant to this unit.

Assignment 2

Due: **Week 5 Friday 5pm**
Weighting: **17%**

Database Queries: This assignment involves the design and execution of database queries to demonstrate knowledge of SQL.

This assignment will be submitted in iLearn and marked online.

On successful completion you will be able to:

- Implement system models into databases, design and create simple databases for business information systems and write programs to produce interactive queries.
- Use discipline specific terminology to communicate concepts and ideas relevant to this unit.

Assignment 3

Due: **Week 6**
Weighting: **10%**

Database Issues and Topics: This assessment involves the group presentation of a problem, possible solutions and a recommended solution relating to the lesson topics covered from Week 4 to Week 6 (inclusive).

The third assignment will be marked in class by your teacher.

On successful completion you will be able to:

- Explain the role and nature of ethics and sustainability in the IT environment.
- Use discipline specific terminology to communicate concepts and ideas relevant to this unit.

Weekly Submissions

Due: **Monday 9am from Week 2**
Weighting: **10%**

Weekly submissions to questions posted in iLearn starting from Week 2 to Week 6.

Each week, a set of exercises will be made available online via iLearn. All the questions will be discussed during your class. You are expected to submit answers to the online question(s) in iLearn before 9 am on the Monday of the following week. Your submission will be marked by your teacher out of 4 marks. There will be 5 exercises worth 2% each.

On successful completion you will be able to:

- Analyse data requirements and design and develop conceptual database models.
- Implement system models into databases, design and create simple databases for business information systems and write programs to produce interactive queries.
- Explain the role and nature of ethics and sustainability in the IT environment.
- Use data analysis and data modelling techniques and tools for introductory level database design and specification

Final Exam

Due: **MUIC Final Examination Period**
Weighting: **45%**

End of unit three hour written examination is to be taken during the MUIC Examination period. The examination will cover material drawn from all parts of the unit's subject matter and will consist of multiple choice questions and short answer questions.

Final exams and final assessments will typically take place in Week 6 or Monday of Week 7. All students enrolled in a teaching session are expected to ensure they are available up until and including Monday of Week 7 to undertake examinations. Passing the final exam or final assessment task is a requirement to pass this unit.

On successful completion you will be able to:

- Analyse data requirements and design and develop conceptual database models.
- Implement system models into databases, design and create simple databases for business information systems and write programs to produce interactive queries.
- Explain the role and nature of ethics and sustainability in the IT environment.
- Use data analysis and data modelling techniques and tools for introductory level database design and specification

Delivery and Resources

DELIVERY & RESOURCES

Scheduled Class Time & Timetables

Weekly face to face contact for this unit will be 2 x 4 hour lessons (8 hours per week, 48 hours per term). Each lesson will consist of 2 hours of theory and 2 hours of practical components. WISY114 is taught via class and computer workshops (collectively termed a lesson). Each week you should attend four hours of two lessons (two classes and two workshops) per week. For details of days, times and rooms consult the timetables webpage.

Workshops are used to introduce new material, provide motivation and context for your study, guide you in what is important to learn and explain more difficult concepts. They also give you the opportunity to interact with your peers and with an instructor who has a sound knowledge of the subject. This also gives you a chance to practice your technology skills.

If any scheduled class falls on a public holiday, a make-up lesson may be scheduled. Where appropriate, the instructor may instead organise an online make-up lesson or require students to complete activities outside of class. Scheduled make-up days will be announced in class and attendance may be taken taken.

Attendance Requirements - All students

All students are required to attend at least 80% of scheduled class time to pass this unit.

Attendance will be monitored in each lesson & students will be able to see their attendance records for a unit via iLearn.

Where a student is present for a part of a lesson (for example arrives late, leaves early, leaves the class frequently or for lengthy periods, engages in inappropriate or unrelated activities or does not participate actively in the majority of the lesson) the teacher reserves the right to mark a student absent for that part of the lesson.

Because of the intensive nature of this program, students should be aware that their attendance in this unit may fall below 80% relatively quickly.

In cases of unavoidable non-attendance due to illness or circumstances beyond control, students should lodge a Disruption to Studies Notification via ask.mq.edu.au within 5 working days and supply relevant supporting documentation, even if they have not missed a formal assessment task. This will ensure that that appropriate records of unavoidable absences can be made.

For further information on attendance, please refer to the Attendance and Study Load Policy.

iLearn

iLearn is Macquarie's online learning management system and a principal resource which will be used throughout the term. Students should access iLearn at least 3 times per week as it will contain important information including:

- Announcements - Teaching staff will communicate to the class using

iLearn announcements.

- A link to the unit guide for the unit and staff contact details
- Lecture notes and recordings where available
- Learning and teaching activities and resources
- Assessment information
- Tutorial questions and solutions
- Assessment submission tools such as Turnitin
- Other relevant material

For any technical or support issues using iLearn, please contact the IT helpdesk (Ph. 02 9850 4357) or lodge a ticket using OneHelp.

Preparing for and Participating in Lessons

Each week you should:

- Attend lessons, take notes, ask questions and seek feedback from your instructor on your work
- Read assigned reading material (ideally before the lesson), add to your notes and prepare questions for your instructor
- Start working on any assignments immediately after they have been released.
- PowerPoint notes are made available each week but these notes are intended as an outline of the lesson only and are not a substitute for your own notes or reading of the textbook or other additional material.

Please note that you are required to submit answers to weekly submissions every Monday (From Week 2 to Week 6), required to submit two assignments and give a presentation in the workshop (assignment 3) and expected to attend most of the tutorials and practicals. Failure to do so may result in you failing the unit.

Resources to assist your learning

Textbook

The textbook for WISY114 this semester is:

Modern Database Management Global Edition 11th edition, Jeffrey A. Hoffer, V. Ramesh, Heikki Topi ISBN: ISBN 9780273779285

Technology

MS Word, MS PowerPoint, Sybase PowerDesigner, SQL Developer Client and Oracle

Websites

The web page for this unit can be found at http://ilearn.mq.edu.au/course/view.php?id=17512

Discussion Boards

The unit makes use of discussion boards hosted within iLearn. Please post questions of general interest there (for example, about assessment tasks), they are monitored by the staff on the unit.

Unit Schedule

Topic List

Lesson	Topic	Reading/ Chapter
1.1	Introduction to unit and databases	Hoffer 1
1.2	Conceptual Data Modelling	Hoffer 2-3
2.1	Logical Data Modelling	Hoffer 4
2.2	Physical Data Modelling	Hoffer 5
3.1	Introduction to SQL	Hoffer 6
3.2	Advanced SQL Assignment1 due on Friday this week	Hoffer 7
4.1	Database Application Development Feedback on Assignment 1	Hoffer 8
4.2	Data Warehousing	Hoffer 9
5.1	Business Intelligence, Data Quality and Integration	Hoffer 10
5.2	Advanced Database Topics I: Data and Database Administration Assignment 2 due on Friday this week	Hoffer 11
6.1	Advanced Database Topics II: Distributed Databases, Object-Oriented Databases, Object-Relational Databases and Green IT Feedback on Assignment 2	Hoffer 12-14
6.2	Presentations for Assignment 3 during the lesson, Final Exam Revision	
FINAL EXAM	Final exams and final assessments will typically take place in Week 6 or Monday of Week 7. All students enrolled in a teaching session are expected to ensure they are available up until and including Monday of Week 7 to undertake examinations. Passing the final exam or final assessment task is a requirement to pass this unit.	

Learning and Teaching Activities

Lessons

Theory classes from teacher(s)

Workhops

Workhops supervised by teacher(s) to provide personalised feedback and an interactive learning environment

Weekly submission

Submission of answers to weekly questions posted in iLearn.

Assignment submission

Submission of assignments related to specific tasks

Presentation preparation and delivery

Preparation of a topic and presentation in workshops in pairs

Final Examination

Assessment of individual learning

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central. Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

New Assessment Policy in effect from Session 2 2016 http://mq.edu.au/policy/docs/assessment/policy_2016.html. For more information visit http://students.mq.edu.au/events/2016/07/19/new_assessment_policy_in_place_from_session_2/

Assessment Policy prior to Session 2 2016 http://mq.edu.au/policy/docs/assessment/policy.html

Grading Policy prior to Session 2 2016 http://mq.edu.au/policy/docs/grading/policy.html

Grade Appeal Policy http://mq.edu.au/policy/docs/gradeappeal/policy.html

Complaint Management Procedure for Students and Members of the Public http://www.mq.edu.au/policy/docs/complaint_management/procedure.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the Learning and Teaching Category of Policy Central.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/support/student_conduct/

Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

Learning outcomes

- Use data analysis and data modelling techniques and tools for introductory level database design and specification
- Use discipline specific terminology to communicate concepts and ideas relevant to this unit.

Assessment tasks

- Assignment 1
- Assignment 2

Learning and teaching activities

- Workhops supervised by teacher(s) to provide personalised feedback and an interactive learning environment

Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

Learning outcome

- Explain the role and nature of ethics and sustainability in the IT environment.

Assessment task

- Assignment 3

Learning and teaching activity

- Preparation of a topic and presentation in workshops in pairs

Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

Learning outcome

- Explain the role and nature of ethics and sustainability in the IT environment.

Assessment task

- Assignment 3

Learning and teaching activity

- Preparation of a topic and presentation in workshops in pairs

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcomes

- Analyse data requirements and design and develop conceptual database models.
- Implement system models into databases, design and create simple databases for business information systems and write programs to produce interactive queries.
- Use data analysis and data modelling techniques and tools for introductory level database design and specification
- Use discipline specific terminology to communicate concepts and ideas relevant to this unit.

Assessment tasks

- Assignment 1
- Assignment 2
- Weekly Submissions
- Final Exam

Learning and teaching activities

- Theory classes from teacher(s)
- Workhops supervised by teacher(s) to provide personalised feedback and an interactive learning environment
- Submission of answers to weekly questions posted in iLearn.

- Submission of assignments related to specific tasks
- Assessment of individual learning

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

- Analyse data requirements and design and develop conceptual database models.
- Implement system models into databases, design and create simple databases for business information systems and write programs to produce interactive queries.
- Use data analysis and data modelling techniques and tools for introductory level database design and specification
- Use discipline specific terminology to communicate concepts and ideas relevant to this unit.

Assessment tasks

- Assignment 1
- Weekly Submissions
- Final Exam

Learning and teaching activities

- Workhops supervised by teacher(s) to provide personalised feedback and an interactive learning environment
- Submission of assignments related to specific tasks
- Preparation of a topic and presentation in workshops in pairs
- Assessment of individual learning

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

- Analyse data requirements and design and develop conceptual database models.
- Implement system models into databases, design and create simple databases for business information systems and write programs to produce interactive queries.
- Explain the role and nature of ethics and sustainability in the IT environment.

Assessment tasks

- Assignment 1
- Assignment 2
- Assignment 3
- Weekly Submissions
- Final Exam

Learning and teaching activities

- Workhops supervised by teacher(s) to provide personalised feedback and an interactive learning environment
- Submission of assignments related to specific tasks

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcomes

- Analyse data requirements and design and develop conceptual database models.
- Explain the role and nature of ethics and sustainability in the IT environment.
- Use data analysis and data modelling techniques and tools for introductory level database design and specification
- Use discipline specific terminology to communicate concepts and ideas relevant to this unit.

Assessment tasks

- Assignment 1
- Assignment 3
- Weekly Submissions

- Final Exam

Learning and teaching activities

- Workhops supervised by teacher(s) to provide personalised feedback and an interactive learning environment
- Submission of assignments related to specific tasks
- Preparation of a topic and presentation in workshops in pairs

Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

Learning outcome

- Explain the role and nature of ethics and sustainability in the IT environment.

Assessment tasks

- Assignment 3
- Weekly Submissions
- Final Exam

Learning and teaching activities

- Theory classes from teacher(s)
- Workhops supervised by teacher(s) to provide personalised feedback and an interactive learning environment
- Preparation of a topic and presentation in workshops in pairs
- Assessment of individual learning

Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

Learning outcome

- Explain the role and nature of ethics and sustainability in the IT environment.

Assessment tasks

- Assignment 3
- Weekly Submissions
- Final Exam

Learning and teaching activities

- Theory classes from teacher(s)
- Workhops supervised by teacher(s) to provide personalised feedback and an interactive learning environment
- Preparation of a topic and presentation in workshops in pairs
- Assessment of individual learning