



## UNSW Course Outline

# COMM2822 Introduction to Databases for Business Analytics - 2024

Published on the 13 May 2024

## General Course Information

Course Code : COMM2822

Year : 2024

Term : Term 2

Teaching Period : T2

Is a multi-term course? : No

Faculty : UNSW Business School

Academic Unit : School of Information Systems and Technology Management

Delivery Mode : In Person

Delivery Format : Standard

Delivery Location : Kensington

Campus : Sydney

Study Level : Undergraduate

Units of Credit : 6

### Useful Links

[Handbook Class Timetable](#)

## Course Details & Outcomes

### Course Description

*Note: This course was previously identified as COMM1822. Students who have completed*

*COMM1822 cannot enrol in COMM2822.*

This is a fundamental Business Analytics course. You will learn the concepts, techniques, and technologies relevant for creating and managing business databases. You will learn the Structured Query Language (SQL) language and how to use it to access data stored in relational database system, including fetch, delete, insert, and modify data.

## **Course Aims**

The course aims to give students the background of, and a process for, database development. Furthermore, the course aims to develop students' conceptual and logical database design skills. Finally, the course aims to develop students' skills in using and managing databases. Students will practice self-directed work in groups that will help them develop their interpersonal communication, project management and quality assurance skills.

## Course Learning Outcomes

Course Learning Outcomes	Program learning outcomes
CL01 : Create and apply conceptual and relational database modelling methods.	• PL02 : Problem Solving
CL02 : Design, implement and evaluate database systems.	• PL02 : Problem Solving
CL03 : Access and manipulate a relational database using Structured Query Language.	• PL02 : Problem Solving
CL04 : Collaborate with peers as a team to solve problems and achieve outcomes.	• PL02 : Problem Solving • PL03 : Business Communication • PL04 : Teamwork
CL05 : Discuss database ethical issues and elaborate on the privacy and security implications of Big Data and business analytics.	• PL01 : Business Knowledge • PL05 : Responsible Business Practice • PL06 : Global and Cultural Competence

Course Learning Outcomes	Assessment Item
CL01 : Create and apply conceptual and relational database modelling methods.	• Class Preparation and Participation • Individual Assessment • Team Assignment • Final Exam
CL02 : Design, implement and evaluate database systems.	• Class Preparation and Participation • Individual Assessment • Team Assignment • Final Exam
CL03 : Access and manipulate a relational database using Structured Query Language.	• Class Preparation and Participation • Team Assignment • Final Exam
CL04 : Collaborate with peers as a team to solve problems and achieve outcomes.	• Team Assignment
CL05 : Discuss database ethical issues and elaborate on the privacy and security implications of Big Data and business analytics.	• Class Preparation and Participation • Final Exam • Team Assignment

## Learning and Teaching Technologies

Moodle - Learning Management System | Microsoft Teams | Echo 360

## Learning and Teaching in this course

The lecture and the tutorial provide students with a chance to learn fundamental database

knowledge and skills. There will be several course activities to foster critical thinking, develop problem-solving skills, and prepare students to work effectively with databases. We provide practical assistance through hands-on exercises in the tutorials. However, students need to take the initiative to self-learn the practical components throughout the course. Pre-lecture materials, lectures, tutorials, and the textbook can only provide the context, structure, and resources for their learning. Students' practical engagements with the material in self-study or peer groups are the crucial elements of their learning. The major assignment is a project concerning the design and development of a business database. In this course, students will learn to use Entity-Relationship (ER) notation such as Chen's and the Oracle SQL query language, and they will be taught Big Data Analytics.

# Assessments

## Assessment Structure

Assessment Item	Weight	Relevant Dates	Program learning outcomes
Class Preparation and Participation Assessment Format: Individual	10%	Start Date: Weekly Due Date: Weekly	<ul style="list-style-type: none"> <li>• PL01 : Business Knowledge</li> <li>• PL02 : Problem Solving</li> <li>• PL05 : Responsible Business Practice</li> </ul>
Individual Assessment Format: Individual	20%	Start Date: Please refer to Moodle for more information. Due Date: Please refer to Moodle for more information.	<ul style="list-style-type: none"> <li>• PL02 : Problem Solving</li> <li>• PL03 : Business Communication</li> </ul>
Team Assignment Assessment Format: Group	25%	Start Date: Please refer to Moodle for more information. Due Date: Please refer to Moodle for more information.	<ul style="list-style-type: none"> <li>• PL01 : Business Knowledge</li> <li>• PL02 : Problem Solving</li> <li>• PL03 : Business Communication</li> <li>• PL04 : Teamwork</li> <li>• PL05 : Responsible Business Practice</li> <li>• PL06 : Global and Cultural Competence</li> </ul>
Final Exam Assessment Format: Individual	45%	Start Date: University exams period Due Date: University exams period	<ul style="list-style-type: none"> <li>• PL01 : Business Knowledge</li> <li>• PL02 : Problem Solving</li> <li>• PL05 : Responsible Business Practice</li> </ul>

# Assessment Details

## Class Preparation and Participation

### Assessment Overview

You are required to complete the weekly pre-class activities and tutorial exercises and you will be assessed on the topic each week. Further details of this assessment will be provided on Moodle.

The pre-class activities and tutorial exercises support the development of skills required for individual and team assignments. Note that late submissions are not accepted and there is no special consideration for this assessment component.

Assesses: PLO1, PLO2, PLO5

### Course Learning Outcomes

- CL01 : Create and apply conceptual and relational database modelling methods.
- CL02 : Design, implement and evaluate database systems.
- CL03 : Access and manipulate a relational database using Structured Query Language.
- CL05 : Discuss database ethical issues and elaborate on the privacy and security implications of Big Data and business analytics.

### Assignment submission Turnitin type

Not Applicable

## Individual Assessment

### Assessment Overview

The purpose of the individual assignment is to enhance students' understanding of database design and modelling. Students work independently to apply the knowledge acquired in the course to model a real-world case study database and present their Entity Relationship (ER) Model. The assessment will evaluate students' skills in database design and written communication through the written report.

Assesses: PLO2, PLO3

BCom Students: myBCom Course points for PLO2

### Course Learning Outcomes

- CL01 : Create and apply conceptual and relational database modelling methods.
- CL02 : Design, implement and evaluate database systems.

### **Assessment Length**

TBA

### **Submission notes**

Please refer to Moodle for more information.

### **Assignment submission Turnitin type**

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

## **Team Assignment**

### **Assessment Overview**

This assignment is designed to give you a hands-on experience in real-world database design and implementation scenarios by working collaboratively in student groups. Through this teamwork, you'll gain practical insights into the complexities of database systems. The assessment will encompass two critical aspects of your learning journey. Firstly, your ability to communicate your ideas effectively in writing will be evaluated through the preparation of a comprehensive project report. Secondly, your aptitude for oral communication and presentation skills will be assessed as you share the results of your project with your peers. For this assignment, your primary task is to design and implement a fully functional database system using Oracle SQL, an industry-standard database query language. This practical exercise aims to equip you with the skills and knowledge essential for your academic and professional development in the field of database management.

Assesses: PLO1, PLO2, PLO3 PLO4, PLO5, PLO6.

### **Course Learning Outcomes**

- CL01 : Create and apply conceptual and relational database modelling methods.
- CL02 : Design, implement and evaluate database systems.
- CL03 : Access and manipulate a relational database using Structured Query Language.
- CL04 : Collaborate with peers as a team to solve problems and achieve outcomes.
- CL05 : Discuss database ethical issues and elaborate on the privacy and security implications of Big Data and business analytics.

### **Assessment Length**

TBA

### **Submission notes**

Please refer to Moodle for more information.

### **Assessment information**

Students teams are expected to plan ahead and to be able to balance out a missing member without an extension. An extension will not be granted for team projects/assignments.

### **Assignment submission Turnitin type**

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

## **Final Exam**

### **Assessment Overview**

Your active participation in the final exam during the designated UNSW Examination period is a formal assessment of your knowledge and skills. This examination encompasses all the course materials covered in pre-class activities, lectures, tutorials, and assignments. You will be asked to discuss and apply the concepts and principles presented in these learning sources.

Your ability to clearly, coherently and concisely present your answers will be part of the evaluation. You must plan on being available for the full examination period to attend the final exam. In addition, you should also ensure that you would be available for a supplementary examination in the event of illness or misadventure (follow the university guidelines for special consideration available online).☒

Assesses: PLO1, PLO2, PLO5.

BCom Students: MyBCom Course points for PLO5.

### **Course Learning Outcomes**

- CL01 : Create and apply conceptual and relational database modelling methods.
- CL02 : Design, implement and evaluate database systems.
- CL03 : Access and manipulate a relational database using Structured Query Language.
- CL05 : Discuss database ethical issues and elaborate on the privacy and security implications of Big Data and business analytics.

### **Assessment Length**

TBA

### **Submission notes**

To be confirmed

### Assignment submission Turnitin type

This is not a Turnitin assignment

## General Assessment Information

As a student at UNSW you are expected to display [academic integrity](#) in your work and interactions. Where a student breaches the [UNSW Student Code](#) with respect to academic integrity, the University may take disciplinary action under the Student Misconduct Procedure. To assure academic integrity, you may be required to demonstrate reasoning, research and the process of constructing work submitted for assessment.

To assist you in understanding what academic integrity means, and how to ensure that you do comply with the UNSW Student Code, it is strongly recommended that you complete the [Working with Academic Integrity](#) module before submitting your first assessment task. It is a free, online self-paced Moodle module that should take about one hour to complete.

You are expected to complete all assessment tasks for your courses in the School of Information Systems and Technology Management. Classes are highly practical and relevant to your assessments, so you are expected to attend at least 80% of all scheduled classes.

Where group assignments are used, team members are expected to work in a harmonious and professional fashion, which includes adequate management of non-performing members. You should inform your tutor as soon as possible if you experience problems within a project team. You may be required to evaluate the contribution of each team member (including yourself) in group work and marks for individual students may be adjusted based on peer assessment.

### Grading Basis

Standard

### Requirements to pass course

In order to pass this course, you must:

- achieve a composite mark of at least 50 out of 100;
- meet any additional requirements described in the Assessment Summary section.

# Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 27 May - 2 June	Lecture	Introduction to Analytical Database Entity Relationship (ER) Modelling (Essential)
	Tutorial	ER Modelling (Essential)
	Assessment	Class Preparation and Participation
Week 2 : 3 June - 9 June	Lecture	Entity Relationship (ER) Modelling (Advanced)
	Tutorial	Entity Relationship (ER) Modelling (Advanced)
	Assessment	Class Preparation and Participation
Week 3 : 10 June - 16 June	Lecture	From ER Modelling to Relational Modelling SQL 1 (Introduction) Note: Recordings will be available due to public holiday
	Tutorial	DDL and DML: Table Creation and Insert Statement DQL: Basic SQL Functions
	Assessment	Class Preparation and Participation
Week 4 : 17 June - 23 June	Lecture	Relational Modelling 2 SQL 2 (DQL)
	Tutorial	Relational Modelling 2 DQL: Restricting Rows and Single-Row Functions
	Assessment	Class Preparation and Participation Individual Assignment due
Week 5 : 24 June - 30 June	Lecture	Database Normalisation 1 SQL 3 (DQL - JOINS)
	Tutorial	DQL: Joining Data from Multiple Tables DDL: Constraints (PK & FK)
	Assessment	Class Preparation and Participation
Week 6 : 1 July - 7 July	Lecture	Flexibility week (No Class)
	Tutorial	Flexibility week (No Class)
Week 7 : 8 July - 14 July	Lecture	Database Normalisation 2 SQL 4 (DQL - Group and Aggregate Functions)
	Tutorial	Database Normalisation DQL - Group and Aggregate Functions
	Assessment	Class Preparation and Participation
Week 8 : 15 July - 21 July	Lecture	Ethics + Big Data Analytics I Database Access Control
	Tutorial	DCL: Database Access Control (Grant and Revoke) TCL: Commits & Rollback
	Assessment	Class Preparation and Participation Team Assignment Progress Check
Week 9 : 22 July - 28 July	Lecture	Big Data Analytics II
	Tutorial	DQL: Subqueries DML: Merge statements DDL: Views
	Assessment	Class Preparation and Participation Team Assignment Progress Check
Week 10 : 29 July - 4 August	Lecture	Database Development & Professional Roles Exam Preparation
	Tutorial	Project presentations in tutorial class (i.e., attendance is mandatory)
	Assessment	Team Assignment due Project presentations in tutorial class (i.e., attendance is mandatory)

## Attendance Requirements

Your regular attendance and active engagement in all scheduled classes and online learning

activities is expected in this course. Failure to attend / engage in assessment tasks that are integrated into learning activities (e.g., class discussion, presentations) will be reflected in the marks for these assessable activities. The Business School may refuse final assessment to those students who attend less than 80% of scheduled classes where attendance and participation is required as part of the learning process (e.g., tutorials, flipped classroom sessions, seminars, labs, etc.). If you are not able to regularly attend classes, you should consult the relevant Course Authority.

[View more information on attendance](#)

## Course Resources

### Prescribed Resources

The textbooks for this course are:

- Coronel, C., Morris, S. (2023) Database Systems: Design, Implementation & Management [14e]. Cengage Learning, Independence, KY, USA. (ISBN-13: ISBN-13: 9780357673034) (for the lectures)
- Casteel, J. (2015) Oracle 12c: SQL. Cengage Learning, Independence, KY, USA. (ISBN: 9781305251038) (for the tutorials)

Note: eBook version of the textbook is also available from the UNSW Bookshop (see <https://www.bookshop.unsw.edu.au/details.cgi?ITEMNO=9780357673034> and <https://www.bookshop.unsw.edu.au/details.cgi?ITEMNO=9781305251038>).

Both books are relevant for this course. Coronel and Morris (2019) support the lecture; Casteel (2015) supports the lab. The latest edition is recommended. However, students typically find older editions (e.g. Oracle 11g SQL for the labs) of the books sufficient for the course. Additional course materials may be provided in class and on the course website on UNSW Moodle.

### Recommended Resources

Recommended:

- Connolly, T. M., & Begg, C. E. (2005) Database Systems: A Practical Approach to Design, Implementation, and Management [6e]. Pearson Education, Harlow, UK. (ISBN-13: 9781292061184)

## Course Evaluation and Development

Feedback is regularly sought from students and continual improvements are made based on this

feedback. At the end of this course, you will be asked to complete the [myExperience survey](#), which provides a key source of student evaluative feedback. Your input into this quality enhancement process is extremely valuable in assisting us to meet the needs of our students and provide an effective and enriching learning experience. The results of all surveys are carefully considered and do lead to action towards enhancing educational quality.

Feedback is regularly sought from students and continual improvements are made based on this feedback. At the end of this course, you will be asked to complete the myExperience survey, which provides a key source of student evaluative feedback. Your input into this quality enhancement process is extremely valuable in assisting us to meet the needs of our students and provide an effective and enriching learning experience. The results of all surveys are carefully considered and do lead to action towards enhancing educational quality.

In this course, we will seek your feedback through end of term myExperience responses. Feedback will also be encouraged throughout the term via collaborative platforms and in-class discussions. This feedback will be taken into consideration and applied where appropriate. For example, the self and peer-learning assessment component was introduced as a result of feedback highlighting the individual nature of assessment tasks.

## Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Kam-Fung (Henry) Cheung				Wednesdays 11 am – 12 pm Sydney Time (email for appointments)	No	Yes

## Other Useful Information

### Academic Information

#### COURSE POLICIES AND SUPPORT

The Business School expects that you are familiar with the contents of this course outline and the UNSW and Business School learning expectations, rules, policies and support services as listed below:

- Program Learning Outcomes
- Academic Integrity and Plagiarism

- Student Responsibilities and Conduct
- Special Consideration
- Protocol for Viewing Final Exam Scripts
- Student Learning Support Services

Further information is provided on the [key policies and support](#) page.

Students may not circulate or post online any course materials such as handouts, exams, syllabi or similar resources from their courses without the written permission of their instructor.

## STUDENT LEARNING OUTCOMES

The Course Learning Outcomes (CLOs) – under the Outcomes tab – are what you should be able to demonstrate by the end of this course, if you participate fully in learning activities and successfully complete the assessment items.

CLOs also contribute to your achievement of the Program Learning Outcomes (PLOs), which are developed across the duration of a program. PLOs are, in turn, directly linked to [UNSW graduate capabilities](#). More information on Coursework PLOs is available on the [key policies and support](#) page. For PG Research PLOs, including MPDBS, please refer to the [UNSW HDR Learning Outcomes](#).

## Academic Honesty and Plagiarism

As a student at UNSW you are expected to display [academic integrity](#) in your work and interactions. Where a student breaches the [UNSW Student Code](#) with respect to academic integrity, the University may take disciplinary action under the Student Misconduct Procedure. To assure academic integrity, you may be required to demonstrate reasoning, research and the process of constructing work submitted for assessment.

To assist you in understanding what academic integrity means, and how to ensure that you do comply with the UNSW Student Code, it is strongly recommended that you complete the [Working with Academic Integrity](#) module before submitting your first assessment task. It is a free, online self-paced Moodle module that should take about one hour to complete.

## Submission of Assessment Tasks

### SPECIAL CONSIDERATION

You can apply for special consideration when illness or other circumstances beyond your control

interfere with your performance in a specific assessment task or tasks, including online exams. Students studying remotely who have exams scheduled between 10pm and 7am local time, are also able to apply for special consideration to sit a supplementary exam at a time outside of these hours.

Special consideration is primarily intended to provide you with an extra opportunity to demonstrate the level of performance of which you are capable. To apply, and for further information, see Special Consideration on the UNSW [Current Students](#) page.

Special consideration applications will be assessed centrally by the Case Review Team, who will update the online application with the outcome and add any relevant comments. The change to the status of the application immediately sends an email to the student and to the assessor with the outcome of the application.

Please note the following:

1. Applications can only be made through Online Services in myUNSW (see the UNSW [Current Students](#) page). Applications will not be accepted by teaching staff. The lecturer-in-charge/course coordinator will be automatically notified when your application is processed.
2. Applying for special consideration does not automatically mean that you will be granted a supplementary exam or other concession.
3. If you experience illness or misadventure in the lead up to an exam or assessment, you must submit an application for special consideration, either prior to the examination taking place, or prior to the assessment submission deadline, except where illness or misadventure prevent you from doing so.
4. If your circumstances stop you from applying before your exam or assessment due date, you must apply within 3 working days of the assessment or the period covered by your supporting documentation.
5. Under the UNSW Fit To Sit/Submit rule, if you sit the exam/submit an assignment, you are declaring yourself well enough to do so and are cannot subsequently apply for special consideration.
6. If you become unwell on the day of – or during – an exam, you must stop working on your exam, advise your course coordinator or tutor and provide a medical certificate dated within 24 hours of the exam, with your special consideration application. For online exams, you must contact your course coordinator or tutor immediately via email, Moodle or chat and advise them you are unwell and submit screenshots of your conversation along with your medical certificate and application.
7. Special consideration requests do not allow the awarding of additional marks to students.

Further information on Business School policy and procedure can be found under “Special

Consideration" on the [key policies and support](#) page.

## **LATE SUBMISSION PENALTIES**

For assessments other than examinations, late submission will incur a penalty of 5% per day or part thereof (including weekends) from the due date and time. An assessment will not be accepted after 5 days (120 hours) of the original deadline unless special consideration has been approved. An assignment is considered late if the requested format, such as hard copy or electronic copy, has not been submitted on time or where the 'wrong' assignment has been submitted.

For assessments which account for 10% or less of the overall course grade, and where answers are immediately discussed or debriefed, the LIC may stipulate a different penalty. Details of such late penalties will be available on the course Moodle page.

## **FEEDBACK ON YOUR ASSESSMENT TASK PERFORMANCE**

Feedback on student performance from formative and summative assessment tasks will be provided to students in a timely manner. Assessment tasks completed within the teaching period of a course, other than a final assessment, will be assessed and students provided with feedback, with or without a provisional result, within 10 working days of submission, under normal circumstances. Feedback on continuous assessment tasks (e.g. laboratory and studio-based, workplace-based, weekly quizzes) will be provided prior to the midpoint of the course.

## **Faculty-specific Information**

### **PROTOCOL FOR VIEWING FINAL EXAM SCRIPTS**

UNSW students have the right to view their final exam scripts, subject to a small number of very specific exemptions. The UNSW Business School has set a [protocol](#) under which students may view their final exam script. Individual schools within the Faculty may also set up additional local processes for viewing final exam scripts, so it is important that you check with your School.

If you are completing courses from the following schools, please note the additional school-specific information:

- Students in the **School of Accounting, Auditing & Taxation** who wish to view their final examination script should also refer to [this page](#).
- Students in the **School of Banking & Finance** should also refer to [this page](#).

- Students in the **School of Information Systems & Technology Management** should also refer to [this page](#).

## **COURSE EVALUATION AND DEVELOPMENT**

Feedback is regularly sought from students and continual improvements are made based on this feedback. At the end of this course, you will be asked to complete the [myExperience survey](#), which provides a key source of student evaluative feedback. Your input into this quality enhancement process is extremely valuable in assisting us to meet the needs of our students and provide an effective and enriching learning experience. The results of all surveys are carefully considered and do lead to action towards enhancing educational quality.

## **QUALITY ASSURANCE**

The Business School is actively monitoring student learning and quality of the student experience in all its programs. A random selection of completed assessment tasks may be used for quality assurance, such as to determine the extent to which program learning goals are being achieved. The information is required for accreditation purposes, and aggregated findings will be used to inform changes aimed at improving the quality of Business School programs. All material used for such processes will be treated as confidential.

## **TEACHING TIMES AND LOCATIONS**

Please note that teaching times and locations are subject to change. Students are strongly advised to refer to the [Class Timetable website](#) for the most up-to-date teaching times and locations.