COURSE OUTLINE

BUS714 Applied Business Analytics

School: School of Business and Creative Industries

2026 | Session 3

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 unisc.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

In this course, you will learn applied business analytics with a focus on predictive and prescriptive methods. You'll explore how to use advanced analytics techniques to forecast outcomes, optimise decision-making, and solve complex business problems. By applying these methods to real-world scenarios, you'll develop the skills to drive strategic decisions and create value within an organisation.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – Interactive online learning activities.	2hrs	Week 1	6 times
Tutorial/Workshop 1 – Scheduled face to face workshops.	3hrs	Week 1	6 times
Information session – Additional Information Sessions	1hr	Week 1	2 times
ONLINE			
Learning materials – Interactive online learning activities.	2hrs	Week 1	6 times
Tutorial/Workshop 1 – Scheduled online workshops (Recorded).	3hrs	Week 1	6 times
Information session – Additional Information Sessions	1hr	Week 1	2 times

1.3. Course Topics

- Time Series Analysis and Forecasting.
- Predictive Data Mining
- Simulation and Optimastion
- Spreadsheet modelling
- Decision Analysis
- Clustering and Market Analysis

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 MAPPING Completing these tasks successfully will contribute to you becoming...	PROFESSIONAL STANDARD MAPPING * Association to Advance Collegiate Schools of Business
1 Describe the foundations and applications of business analytics in various business contexts.	Knowledgeable	PC6, PC6.2
2 Apply business analytics methods to support solving complex business problems and improve decision-making processes.	Creative and critical thinker Problem solving	PC3, PC3.1
3 Utilise advanced digital tools and techniques for analysis of complex data to generate insights and support decision-making in various contexts.	Empowered Applying technologies	PC6, PC6.2
4 Communicate business insights effectively using data visualisation and reporting techniques to engage stakeholders and inform strategic decisions.	Engaged Communication Information literacy	PC1, PC1.3

* Competencies by Professional Body

CODE	COMPETENCY
ASSOCIATION TO ADVANCE COLLEGIATE SCHOOLS OF BUSINESS	
PC1	Communication
PC1.3	Digital Literacy
PC3	Creative and Critical Thinking
PC3.1	Problem Solving
PC6	Career-adaptive
PC6.2	Discipline Knowledge

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

Enrolled in any PGRD program.

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

Not applicable

5.4. Specific assumed prior knowledge and skills (where applicable)

Not applicable

5.5. Microcredential Information

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 will be provided using various methods in the first few weeks of the session.

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	Oral and Written Piece	Individual	50%	Students will be asked to submit their R script and a 250-word reflection. They will explain their code, thinking, and findings, and communicate key insights in a recorded presentation lasting 6-10 minutes.	Week 4	Online Submission
All	2	Oral and Written Piece	Individual	50%	Students will be asked to submit an R Markdown or Quarto file. They will explain their code, thinking, and findings, and communicate key insights in a recorded presentation lasting 6-10 minutes.	Week 7	Online Submission

All - Assessment Task 1: Applied Analytics Challenge

GOAL:	Demonstrate the ability to generate and test hypotheses, analyze and visualize data using R, and reflect on your analytical process and findings to inform stakeholder decision-making.
PRODUCT:	Oral and Written Piece
AUTHORSHIP STATEMENT:	
FORMAT:	For this assessment, students will complete a structured data analysis task and submit a multi-part recorded presentation. First, they will record themselves presenting and explaining their R code and workflow directly within RStudio. This segment should be 3–5 minutes long and must begin with the student clearly showing their ID on camera. Immediately following this, students will present a PowerPoint summarizing their key findings and recommendations to a stakeholder audience. This presentation should be 2–4 minutes in length and also be recorded with the student visible throughout. At all times during both segments, students must remain on camera to verify authorship. Finally, students will submit the recording, their R script, and a 250-word written reflection discussing their analytical process, challenges encountered, and how their findings could inform decision-making. All components are to be submitted via Canvas.
CRITERIA:	

No.		Learning Outcome assessed
1	Formulate a testable hypothesis based on the scenario.	1 2
2	Import, clean, transform, and analyze the data using R.	2 3
3	Create at least one ggplot2 visualization that supports their analysis and communicates a key insight.	3 4
4	Write a short reflection on the process, challenges, and how your findings could inform stakeholder decisions.	2 4

GENERIC SKILLS:	Communication, Problem solving, Applying technologies, Information literacy

All - Assessment Task 2: Advanced Analysis & Reproducible Reporting

GOAL:	Apply the analytics workflow, from hypothesis generation to data cleaning, transformation, and analysis using the Tidyverse, while conducting reproducible, well-documented analysis and communicating insights effectively.
PRODUCT:	Oral and Written Piece
AUTHORSHIP STATEMENT:	
FORMAT:	For this assessment, students will complete a structured data analysis task and submit a multi-part recorded presentation. First, they will record themselves presenting and explaining their R code and workflow directly within RStudio. This segment should be 3–5 minutes long and must begin with the student clearly showing their ID on camera. Following this, students will present their key findings and recommendations in a 2–4 minute recorded segment, also with their face visible throughout to verify authorship. All findings should be communicated using visualizations and commentary embedded within an R Markdown or Quarto document, which will also include the student's written reflection on their analytical process, challenges encountered, and implications for decision-making. The final submission, comprising the recorded presentation and the reproducible R Markdown or Quarto file, must be uploaded via Canvas.
CRITERIA:	

No.		Learning Outcome assessed
1	Apply the analytics workflow to explore a meaningful question and develop a testable hypothesis	1
2	Import, transform, and analyze the data using R and the Tidyverse, working with different data structures	2 3
3	Document their entire workflow using a reproducible authoring framework (e.g., R Markdown or Quarto), including code, commentary, and outputs	2 4
4	Record a short presentation communicating their key findings and recommendations to a stakeholder audience	4

GENERIC SKILLS:	Communication, Problem solving, Applying technologies, Information literacy

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

You need regular access to the resource(s) below. Many texts are available as ebooks through the Library at no additional cost.

REQUIRED?	AUTHOR	YEAR	TITLE	EDITION	PUBLISHER
Recommended	Jeffrey D. Camm,James J. Cochran,Michael J. Fry,Jeffrey W. Ohlmann	2024	Business Analytics	5th	Cengage

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:
(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. 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

10.5. 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.

10.6. General Enquiries

For course-specific questions, contact your teaching staff or Course Coordinator.

For other enquiries or to access support, please contact Student Central:

- UniSC Student Central
- UniSC Adelaide Student Central