UNSW Course Outline

INFS5700 Introduction to Business Analytics - 2024

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General Course Information

Course Code : INFS5700
Year : 2024
Term : Term 3
Teaching Period : T3
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 : Postgraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

Business Analytics can be defined as the extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive decisions and actions (Davenport et al 2010). Organisations recognise the need to learn more about business

analytics as high quality information about their capabilities and those of their competition is essential for effective decision making to be competitive and generate value.

This course presents the fundamentals of implementing and managing business analytics in organisations. In particular, it focuses on data visualisation by introducing key concepts in data visualisation and visual analytics. It helps you to develop the ability in applying a range of different data visualisation techniques and tools, including Power BI and SAS Visual Analytics, to produce effective data-driven visual reports in different context. It also develops your ability to effectively communicate insights in the visualisations to inform business decision.

Course Aims

This subject equips students with the foundations and tools needed for a career in business analytics.

Relationship to Other Courses

This course is the foundational core course for the Business Analytics specialization in the Master of Commerce program.

Course Learning Outcomes

Course Learning Outcomes	Program learning outcomes
CLO1 : Critically evaluate the role of data in supporting management decision-making and gaining competitive advantage	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO4 : Teamwork
CLO2 : Discuss and evaluate Business Analytics framework, techniques and tools used in gathering, analysing and managing data and apply them to enhance decision making.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO4 : Teamwork
CLO3 : Examine datasets using visual analytic techniques and communicate findings using dashboards and data driven visual reports.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication
CLO4 : Investigate the challenges, critical factors and organisational impacts associated with being business analytically capable.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO5 : Responsible Business Practice
CLO5 : Analyse the ethical impact of big data and analytics on responsible business practices.	• PLO1 : Business Knowledge • PLO5 : Responsible Business Practice
CLO6 : Research the emerging and global trends of business analytics tools and practices in industry.	• PLO1 : Business Knowledge • PLO3 : Business Communication • PLO6 : Global and Cultural Competence
CLO7 : Effectively utilise visualisations to communicate with analytic team members and influence stakeholder.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO4 : Teamwork • PLO7 : Leadership Development

Course Learning Outcomes	Assessment Item
CLO1 : Critically evaluate the role of data in supporting management decision-making and gaining competitive advantage	• Individual Assignment • Team Assignment • Final Exam
CLO2 : Discuss and evaluate Business Analytics framework, techniques and tools used in gathering, analysing and managing data and apply them to enhance decision making.	• Individual Assignment • Team Assignment • Final Exam
CLO3 : Examine datasets using visual analytic techniques and communicate findings using dashboards and data driven visual reports.	• Team Assignment
CLO4 : Investigate the challenges, critical factors and organisational impacts associated with being business analytically capable.	• Individual Assignment • Final Exam
CLO5 : Analyse the ethical impact of big data and analytics on responsible business practices.	• Final Exam
CLO6 : Research the emerging and global trends of business analytics tools and practices in industry.	• Individual Assignment
CLO7 : Effectively utilise visualisations to communicate with analytic team members and influence stakeholder.	• Team Assignment

Learning and Teaching Technologies

Moodle - Learning Management System | Echo 360 | Power BI and SAS Viya

Learning and Teaching in this course

This course is delivered in a mixed format of lectures and tutorials. Each lecture will focus on different topics regarding business analytics by explaining relevant concepts, theoretical frameworks, and keys issues. To facilitate knowledge and skill development, tutorials are conducted to provide students with the opportunity to perform hands-on exercises and to discuss pressing issues on data analytics through knowledge sharing and case study.

The role of the lecturer and tutor in this environment is to establish a framework and put together a set of materials for discussion, and to create the conditions suitable for learning. The underlying assumption is that we are all co-producers in learning and can work together in a collaborative fashion. It is essential in this course that both students and learning facilitators to participate equally in the discussion. It is assumed that students will have read and thought about the assigned materials before class and come prepared to contribute to the class discussion.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates	Program learning outcomes
Individual Assignment Assessment Format: Individual	15%	Due Date: Week 4: 30 September - 06 October	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO5 : Responsible Business Practice • PLO6 : Global and Cultural Competence
Team Assignment Assessment Format: Group	30%	Due Date: Week 10: 11 November - 17 November	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO4 : Teamwork • PLO5 : Responsible Business Practice • PLO6 : Global and Cultural Competence
Final Exam Assessment Format: Individual	55%	Due Date: Examination Period	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication

Assessment Details

Individual Assignment

Assessment Overview

A short written assignment to be undertaken individually. This assignment will be approx. 1000 words long and will be due in Week 4. Assignment submission will be via the Turnitin assignment upload application. Further details on the individual assignments are available on Moodle.

Course Learning Outcomes

- CLO1 : Critically evaluate the role of data in supporting management decision-making and gaining competitive advantage
- CLO2 : Discuss and evaluate Business Analytics framework, techniques and tools used in gathering, analysing and managing data and apply them to enhance decision making.
- CLO4 : Investigate the challenges, critical factors and organisational impacts associated with being business analytically capable.
- CLO6 : Research the emerging and global trends of business analytics tools and practices in industry.

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Generative AI Permission Level

Assistance with Attribution

This assessment requires you to write/create a first iteration of your submission yourself. You are then permitted to use generative AI tools, software or services to improve your submission in the ways set out below.
Any output of generative AI tools, software or services that is used within your assessment must be attributed with full referencing.
If outputs of generative AI tools, software or services form part of your submission and are not appropriately attributed, your Convenor will determine whether the omission is significant. If so, you may be asked to explain your submission. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.
For more information on Generative AI and permitted use please see here.

Team Assignment

Assessment Overview

For this assignment you will work in a team (TBA members) on a report. The assignment will incorporate a presentation of findings of your investigation.

Course Learning Outcomes

- CLO1 : Critically evaluate the role of data in supporting management decision-making and gaining competitive advantage
- CLO2 : Discuss and evaluate Business Analytics framework, techniques and tools used in gathering, analysing and managing data and apply them to enhance decision making.
- CLO3 : Examine datasets using visual analytic techniques and communicate findings using dashboards and data driven visual reports.
- CLO7 : Effectively utilise visualisations to communicate with analytic team members and influence stakeholder.

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For more information on Generative AI and permitted use please see here.

Final Exam

Assessment Overview

The final exam will be held in the formal examination period. All exams are conducted in accordance with the UNSW Rules for the Conduct of Examinations and it is your responsibility to be familiar with these rules. Information about exams is available from myUNSW. Further details about the final exam will be available on Moodle by Week 10.

Course Learning Outcomes

- CLO1 : Critically evaluate the role of data in supporting management decision-making and gaining competitive advantage
- CLO2 : Discuss and evaluate Business Analytics framework, techniques and tools used in gathering, analysing and managing data and apply them to enhance decision making.
- CLO4 : Investigate the challenges, critical factors and organisational impacts associated with being business analytically capable.
- CLO5 : Analyse the ethical impact of big data and analytics on responsible business practices.

Assignment submission Turnitin type

Not Applicable

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.
For more information on Generative AI and permitted use please see here.

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: (1) achieve a composite mark of at least 50 out of 100, and (2) meet any additional requirements described in the Assessment Summary section. You are expected to attempt all assessment requirements in the course.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 9 September - 15 September	Lecture	Business Analytics in Context
	Tutorial	Business Analytics in Context
Week 2 : 16 September - 22 September	Lecture	Managing and Transforming Data
	Tutorial	Power BI Workshop 1
Week 3 : 23 September - 29 September	Lecture	Data Modelling
	Tutorial	Power BI Workshop 2
Week 4 : 30 September - 6 October	Lecture	Exploring Data Visually
	Tutorial	Power BI Workshop 3
Week 5 : 7 October - 13 October	Lecture	Creating Effective Visualizations: Design Principles No lecture on Monday, 7 October 2024. A replacement lecture will be held on Tuesday, 8 October 2024.
	Tutorial	SAS Viya Workshop 1
Week 6 : 14 October - 20 October	Project	Recharge Week No lecture or tutorial
Week 7 : 21 October - 27 October	Lecture	Creating Effective Visualizations: Understanding Your Audiences
	Tutorial	SAS Viya Workshop 2
Week 8 : 28 October - 3 November	Lecture	Crafting a Powerful Visual Storytelling
	Tutorial	Visual Storytelling Workshop
Week 9 : 4 November - 10 November	Lecture	Data Visualization in Practice: An Industry Perspective
	Tutorial	Visual Communication Workshop
Week 10 : 11 November - 17 November	Lecture	The future of Data Visualization: Challenges and Opportunities Course Review and Exam Preparation
	Tutorial	Team Project Presentation

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Course Resources

Prescribed Resources

Course resources will be provided on Moodle as needed to support the topic(s) covered each week.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Kevin Kuan		QUAD 2072	+61 2 9348 1640	By appointment	Yes	Yes
Lecturer	Maggie Yazhu Wang		QUAD 2069	+61 2 9348 2507	By appointment	No	No

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 Policies and Guidelines 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 Policies and Guidelines page. For PG Research PLOs, including MPDBS, please refer to UNSW HDR learning outcomes.

Academic Honesty and Plagarism

As a student at UNSW you are expected to display academic integrity in your work and interactions. Where a student breaches the UNSW Code of Conduct with respect to academic integrity, the University may take disciplinary action. 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 Code of Conduct, 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

SHORT EXTENSIONS

Short Extension is a new process that allows you to apply for an extended deadline on your assessment without the need to provide supporting documentation, offering immediate approval during brief, life-disrupting events. Requests are automatically approved once submitted.

Short extensions are ONLY available for some assessments. Check your course outline or Moodle to see if this is offered for your assessments. Where a short extension exists, all students enrolled in that course in that term are eligible to apply. Further details are available the UNSW Current Students page.

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. Special consideration is primarily intended to provide you with an extra opportunity to demonstrate the level of performance of which you are capable.

Applications can only be made online and will NOT be accepted by teaching staff. 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. The majority of applications will be processed within 3-5 working days.

For further information, and to apply, see Special Consideration on the UNSW Current Students page.

LATE SUBMISSION PENALTIES

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. In the case of an approved Equitable Learning Plan (ELP) provision, special consideration or short extension, the late penalty applies from the date of approved time extension. After five days from the extended deadline, the assessment cannot be submited.

An assessment is considered late if the requested format, such as hard copy or electronic copy, has not been submitted on time or where the 'wrong' assessment 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.