UNSW Course Outline

MARK5822 Marketing Analytics Tools - 2024

Published on the 15 May 2024

General Course Information

Course Code : MARK5822
Year : 2024
Term : Term 2
Teaching Period : T2
Is a multi-term course? : No
Faculty : UNSW Business School
Academic Unit : School of Marketing
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

MARK5822 helps you to develop capabilities of using advanced analytical tools to address marketing problems – key skills that numerous companies have stated they look for in marketers, particularly in challenging business environments.

You are exposed to a range of statistical tools and techniques, from classical statistical tools to emerging big data techniques. The emphasis is not on formulae of statistical tools, but on how to apply and interpret a range of statistical techniques to help answer marketing-related questions.

The course is organised around daily marketing problems. You are strongly encouraged to start thinking as marketers by asking questions of your data, setting your own direction for the analysis in the project and thinking about how a company could utilise the results in practice.

Course Aims

MARK5822 is offered as a part of the Marketing and Marketing Analytics stream in the MCom degree. The course builds on marketing concepts and basic statistical skills, and extends students' ability to use advanced analytical tools to address marketing problems in daily business practice.

Relationship to Other Courses

Basic statistical knowledge and skills (e.g., statistical distribution, t-test, ANOVA, and linear regression) are assumed before starting this course.

To ensure that you have the necessary statistical knowledge and skills ready for this course, you need to complete COMM5005 or COMM5011 or ECON5248 as a pre-requisite course, or demonstrate equivalent statistics knowledge (seek enrolment permission from Program Coordinator).

Course Learning Outcomes

Course Learning Outcomes	Program learning outcomes
CLO1 : Study the advances in marketing analytics.	
CLO2 : Choose appropriate data sources and analytical tools to design a sophisticated analytical study.	• PLO1 : Business Knowledge • PLO2 : Problem Solving
CLO3 : Use advanced analytical tools to analyse a variety of data collected by marketers.	• PLO1 : Business Knowledge • PLO2 : Problem Solving
CLO4 : Translate the output from analyses into managerial insights that is understandable to marketing managers.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication
CLO5 : Competently and confidently communicate (oral and written) research findings.	• PLO3 : Business Communication • PLO4 : Teamwork
CLO6 : Demonstrate an ability to work in teams and determine self-direction in undertaking tasks, i.e. choose what needs to be done, rather than do what is told.	• PLO2 : Problem Solving • PLO4 : Teamwork • PLO7 : Leadership Development

Course Learning Outcomes	Assessment Item
CLO1 : Study the advances in marketing analytics.	• Group Major Assignment • Quizzes • Final Examination
CLO2 : Choose appropriate data sources and analytical tools to design a sophisticated analytical study.	• Group Major Assignment • Quizzes • Final Examination
CLO3 : Use advanced analytical tools to analyse a variety of data collected by marketers.	• Group Major Assignment • Quizzes • Final Examination
CLO4 : Translate the output from analyses into managerial insights that is understandable to marketing managers.	• Group Major Assignment • Quizzes • Final Examination
CLO5 : Competently and confidently communicate (oral and written) research findings.	• Critical Thinking and Reflection • Group Major Assignment
CLO6 : Demonstrate an ability to work in teams and determine self-direction in undertaking tasks, i.e. choose what needs to be done, rather than do what is told.	• Critical Thinking and Reflection • Group Major Assignment

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

Teaching in this course will be via lectures, tutorials, individual study, and teamwork.

- Lectures: the lectures will introduce a range of various statistical techniques that may be used by marketers to understand marketing problems. Each technique will be introduced within the context of a marketing problem to convey why and how it is used. The emphasis will be on understanding the basics of each technique, how it can be applied, and what the results mean for a marketer. Though some formulae will be presented, memorizing them is not the target. It is presumed that you have completed the required preparation for the week before you attend the lecture.
- Tutorials: the tutorials will be used to reinforce materials covered in the lectures and practise the analytical tools to answer marketing questions. The tutorial program is very practical and is designed to develop your skills via plenty of exercises. Each week you will be given a range of exercises on a specific topic and implement analytical tools on the computer to complete these tasks. You are expected to prepare for the tutorial before the tutorials and revisit the exercises to solidify your learning after the tutorials.
- Individual study: time spent on practice exercises outside of formal lectures and tutorials is highly recommended to consolidate your understanding of all aspects of the course. There are many datasets available on Moodle to enable you to practise what is covered in lectures and tutorials.
- Teamwork: sophisticated marketing projects are completed in teams. During the team project, it is highly recommended that you not only aim to complete the task, but also aim to develop and enhance your teamwork skills. It is very helpful for you to continually reflect on your teamwork experience and come up with improvement ideas.

Additional Course Information

Teaching format.

- In 2024 T2, MARK5822 lectures and tutorials will come back to face-to-face (F2F).
- For F2F tutorials not in the computer lab, e.g., Mat 211, please bring your own laptop. We will have exercises in tutorials that require you to operate on a computer. If you don't have a laptop for your tutorial use, please choose a tutorial in one of the computer labs (including Quad G021). Students are also advice to use their own laptop even in the rooms with available computers

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Group Major Assignment Assessment Format: Group	30%	Start Date: Not Applicable Due Date: See detailed instructions on Moodle
Critical Thinking and Reflection Assessment Format: Individual	10%	Start Date: Not Applicable Due Date: See detailed instructions on Moodle
Quizzes Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: See detailed instructions on Moodle.
Final Examination Assessment Format: Individual	40%	Start Date: Not Applicable Due Date: Exam period

Assessment Details

Group Major Assignment

Assessment Overview

The team project is to be done in groups of up to 5 people from the same tutorial. This project provides you with an opportunity to take your knowledge and skills of the marketing analytics learnt in the course and apply them to a real marketing problem.

Course Learning Outcomes

- CLO1 : Study the advances in marketing analytics.
- CLO2 : Choose appropriate data sources and analytical tools to design a sophisticated analytical study.
- CLO3 : Use advanced analytical tools to analyse a variety of data collected by marketers.
- CLO4 : Translate the output from analyses into managerial insights that is understandable to marketing managers.
- CLO5 : Competently and confidently communicate (oral and written) research findings.
- CLO6 : Demonstrate an ability to work in teams and determine self-direction in undertaking tasks, i.e. choose what needs to be done, rather than do what is told.

Detailed Assessment Description

Detailed instructions for each part of the team project will be posted on Moodle by the end of Week 1.

Report (20%)

The report takes three steps to develop: roles and responsibilities, research plan and final report.

In week 3 you have to submit a 1-2 page document with the roles of all group members. This activity will not be marked, but it will be considered in the case of group conflict. Please outline the timeline and the roles of every group member.

Your team will present your brief research plan in the Week 5 tutorial. This research plan will NOT be marked, but your tutor will give you feedback to help you improve.

The final report will provide insights into the marketing problem, i.e. your findings and suggestions. This will entail you applying a range of analytical tools to the data to provide information on the research objectives and writing a concise, yet insightful overview of what you found. The entire weight of this assessment activity (20%) is based on the final report.

Guidance as well as the marking details will be available on Moodle in Week 1.

Presentation (10%)

Each team will present their findings during the tutorials in the Week 9 tutorial. The presentation should not exceed 15 minutes in length and is worth 10% of the course scores.

As a general guide, your presentation should include the main parts of your project – and that you feel best to highlight your findings and suggestions.

Guidance as well as the marking details will be available on Moodle in Week 1.

Assessment Length

See detailed instructions on Moodle

Submission notes

See detailed instructions on Moodle

Assignment submission Turnitin type

Not Applicable

Critical Thinking and Reflection

Assessment Overview

Critical thinking and reflection is an individual report that has two components. Component 1 requires you to reflect on a business context, analyze the situation, and provide well-justified suggestions, on how marketing analytical tools can help address a realistic marketing problem. Component 2 requires you to reflect on the learning journey throughout the teamwork. The

purpose is to assist with cultivating reflective leaders who are (1) enterprising, innovative and creative; (2) collaborative team workers; (3) professionals who are capable of independent, self-directed practice.

Course Learning Outcomes

- CLO5 : Competently and confidently communicate (oral and written) research findings.
- CLO6 : Demonstrate an ability to work in teams and determine self-direction in undertaking tasks, i.e. choose what needs to be done, rather than do what is told.

Detailed Assessment Description

Detailed instructions for this assessment will be posted on Moodle by the end of Week 1.

Assessment Length

See detailed instructions on Moodle

Submission notes

Submit on Moodle

Assignment submission Turnitin type

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

Quizzes

Assessment Overview

Quiz during the term helps to monitor your learning progress. You will be asked to implement your knowledge and skills to address small-scale analytical problems. Some of the questions may require you to operate statistical software and find out the results.

Course Learning Outcomes

- CLO1 : Study the advances in marketing analytics.
- CLO2 : Choose appropriate data sources and analytical tools to design a sophisticated analytical study.
- CLO3 : Use advanced analytical tools to analyse a variety of data collected by marketers.
- CLO4 : Translate the output from analyses into managerial insights that is understandable to marketing managers.

Detailed Assessment Description

The two quizzes will be on Week 4 and Week 10 during the first hour of the lecture. Each quiz takes around 30 minutes to complete and is worth 10% of the course marks.

Instructions for the quizzes will be available on Moodle by the end of Week 1.

Assessment Length

30 minutes each

Submission notes

Submit on Moodle

Assignment submission Turnitin type

Not Applicable

Final Examination

Assessment Overview

The final exam will take place in the formal examination period at the end of the session. It is designed to provide an individual assessment of the depth of your knowledge of the analytical tools and your competence in explaining their meaning and using them to address marketing problems.

Course Learning Outcomes

- CLO1 : Study the advances in marketing analytics.
- CLO2 : Choose appropriate data sources and analytical tools to design a sophisticated analytical study.
- CLO3 : Use advanced analytical tools to analyse a variety of data collected by marketers.
- CLO4 : Translate the output from analyses into managerial insights that is understandable to marketing managers.

Detailed Assessment Description

The exam will take place in the formal examination period online. It takes 4-6 hours to complete and needs to be completed within a 48-hour time window on Moodle.

Instructions for the final exam will be available on Moodle by the end of Week 6.

Assessment Length

6 hours

Submission notes

Submit on Moodle

Assignment submission Turnitin type

Not Applicable

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.

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 27 May - 2 June	Lecture	Introduction to marketing analytics
	Tutorial	Review of topics Basic of R and R studio
Week 2 : 3 June - 9 June	Lecture	Analysing consumer preferences
	Tutorial	Basic stats review
Week 3 : 10 June - 16 June	Lecture	Analysing consumer preferences: advanced methods
	Tutorial	Preference analysis
	Assessment	Online: Team project: roles and responsibilities Deadline: 14.06. 23.59
Week 4 : 17 June - 23 June	Lecture	Developing new products based on preferences
	Tutorial	Preference analysis: advance topics
	Assessment	The first hour of the lecture: Quiz 1
Week 5 : 24 June - 30 June	Lecture	Customer value assessment
	Tutorial	Conjoint analysis
	Assessment	During the tutorials: Team project: research proposal presentation
Week 6 : 1 July - 7 July	Lecture	[NO LECTURE, Consolidation week]
	Tutorial	[NO TUTORIAL, Consolidation week]
Week 7 : 8 July - 14 July	Lecture	Customer heterogeneity assessment
	Tutorial	Customer value estimation and cluster analysis
Week 8 : 15 July - 21 July	Lecture	Pricing and Advertising models
	Tutorial	Pricing and Advertising models
	Assessment	Online: Team project: Final report and slides Deadline 19.07. 23.59
Week 9 : 22 July - 28 July	Lecture	Text analysis
	Tutorial	Project presentations
	Assessment	During tutorials: Project presentations
Week 10 : 29 July - 4 August	Lecture	Big data mechanism
	Tutorial	NO TUTORIALS
	Assessment	The first hour of the lecture: Quiz 2 Online submission: Critical thinking and reflection Deadline: 02.08. 23.59

Attendance Requirements

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

Course Resources

Prescribed Resources

Course Website

The website for this course is on Moodle at: http://moodle.telt.unsw.edu.au

Lecture Recording

Lectures will be recorded. But please keep in mind that the recordings are for review purpose only, and they are not meant to replace the class attendance. The record setting and quality do not guarantee to fully replicate the lectures, and the interactions in the class will not be possible in the recording.

Prescribed Textbook

There is NO prescribed textbook in the course.

Slides, reading materials and exercise datasets used in a particular week will be available on Moodle by Monday night of that week.

Other Resources

The following is a list of books or online resources you may find useful as additional sources of information.

Marketing research handbook

- Marketing Research: An Applied Orientation (6th Edition) by Malhotra. A global edition is available in Australia. Published in 2010, by Pearson Education, Inc.
- This book can be used as a handbook of marketing research designs and classical analytical tools.

Implementing analytics in marketing strategies

- Marketing Strategy by Robert W. Palmatier and Shrihari Sridhar. Published in 2017, by Palgrave.
- The book provides insights on how analytics are utilised in marketing strategies. There are many books on marketing strategies, but this book relates marketing strategies to analytics.

Multivariate statistics

- Multivariate Data Analysis (7th Edition) by Hair et al. Published in 2010, by Pearson Education, Inc.
- This book provides you with more details on multivariate statistics. It is one example of such books. Many books named Multivariate Data Analysis will do the same too.

Big data analytics

- Big Data: A Revolution that Will Transform How We Live, Work, and Think, by Viktor Mayer-Schšnberger and Kenneth Cukier. Published in 2013, by Eamon Dolan / Houghton Mifflin Harcourt. This book is a good source to get a first understanding of big data.
- Big Data in Practice, by Bernard Marr. Published in 2016, by John Wiley and Sons Ltd. This book provides 45 successful examples of companies using big data analytics to achieve extraordinary success. It is a good source to get a sense of how big data is used in business practice nowadays.
- Machine Learning with R (by Brett Lantz), Mastering Predictive Analytics with R (by Rui Miguel

Forte), Mastering Social Media Mining with R (by Sharan Kumar Ravindran and Vikram Garg). These books are examples of technical books on how to use R to conduct big data analyses.

Excel resources

- Real Statistics Using Excel: http://www.real-statistics.com/. This website has rich Microsoft Excel resources, including Excel add-in software for statistical analyses, statistics instructions, examples, and discussion forums. The Excel add-in software works for both PC and Mac.
- Marketing Analytics: Data-Driven Techniques with Microsoft Excel by Wayne L. Winston. Published in 2014, by John Wiley & Sons, Inc. It is an excellent resource that covers many analytical tools in marketing analytics, using Excel. You may use this book as a hand book and find out the solutions that you face (which may or may not be covered in this course).

R resources

- The R book, by Michael J. Crawley. Published in 2012, by Wiley. One of the best-selling statistics book and R book. A very good introduction and handbook of R.
- R for Marketing Research and Analytics, by Chris Chapman and Elea McDonnell Feit. Published in 2015 by Springer. This book shows you how to use R to address many analytical needs in marketing.

Software learning

- LinkedIn Learning has a number of online courses including many for Excel and R.Free to UNSW students: https://www.myit.unsw.edu.au/services/staff/educational-technology/linkedin-learning
- YouTube.com has plenty of tutorials for Excel and R as well, at various levels. You can use them as a systematic learning tool (e.g., an R course with a series of organized tutorials), or search for a question you have with Excel or R. Many times, a solution to your question is just there, waiting for you to discover.

Essay writing guide

- Q Manual: an academic writing guide provided by Monash University. (The link constantly changes, so please search “Q Manual” on Google and download a copy, free to all.)
- This is a good guide for your essay writing. It also provides a referencing style guide.

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.

Based on feedback from previous students, we organize various analytical tools around daily marketing problems to demonstrate how these tools can help address practical problems that they will face. On top of classical marketing analytics, we spend a fair amount of time to discuss

analytical tools and implementations regarding digital marketing and big data, to help our students thrive in the big data world.

Since students found the group project an excellent learning tool, we create the group project using a real marketing context and real marketing problems. Moreover, we use exercises such as research plan feedback and informal peer evaluation to provide timely support during the procedure.

Previous feedback suggests that lecture recording is desirable for review purposes and in the cases of occasionally lecture missing. It is well-heard, and lectures are recorded.

We learned from a survey of previous post-graduate students that a break week in the middle of the term is preferred (1=do not like at all, 7=like it very much, with an average rating of 6.7 from 63 responses). As a result, week 6 is now left out with no lecture or tutorial, for you to consolidate your learning and prepare for the team project.

If at any time you have any concerns about your progress or any aspects of the course, please feel free to contact me to discuss your concerns.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Lecturer	Ljubomir Pupovac		Quad 3021		Details on Moodle in Week 1	Yes	Yes
Tutor	Siew Imm Theresa Teo		TBD		Details on Moodle in Week 1	No	No
	Zachary Zhaokun Li				Details on Moodle in Week 1	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 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 Plagarism

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.