Unit Outline

ECOM2001 Quantitative Techniques for Business

Trimester 2A, 2024

Unit study package code:	ECOM2001
Mode of study:	Internal
Tuition pattern summary:	Note: For any specific variations to this tuition pattern and for precise information refer to the Learning Activities section. Lecture: 1 x 1.5 Hours Weekly Tutorial: 1 x 1.5 Hours Weekly This unit does not have a fieldwork component.
Credit Value:	25.0
Pre-requisite units:	Nil
Co-requisite units:	Nil
Anti-requisite units:	10815 (v.0) Economic Techniques 201 or any previous version *AND* 10993 (v.0) Business Statistics 201 or any previous version *AND* ECOM5002 (v.0) Business Quantitative Techniques or any previous version *AND* ECOM5003 (v.0) PA500 Business Quantitative Techniques or any previous version *AND* ECON2000 (v.0) Economic Techniques or any previous version *AND* MATH2014 (v.0) Business Statistics or any previous version
Result type:	Grade/Mark
Approved incidental fees:	Information about approved incidental fees can be obtained from our website. Visit https://www.curtin.edu.au/students/essentials/fees/understanding-your-fees/ for details.

Unit coordinator:	**Title:**	Dr
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	Location:	Building: - - Room: TBC
Administrative contact:	**Name:**	Teaching Support Officer
	Phone:	TBA

Email: FBL-TSUnitAdmin@curtin.edu.au
Location: Building: 407 - Room: 422A

Learning Management System: Blackboard (lms.curtin.edu.au)

Acknowledgement of Country

We respectfully acknowledge the Indigenous Elders, custodians, their descendants and kin of this land past and present. The Centre for Aboriginal Studies aspires to contribute to positive social change for Indigenous Australians through higher education and research.

Coronavirus (COVID-19) Update

Curtin University is committed to supporting all our students and staff whether they are on campus, working remotely or overseas. Your health, safety and wellbeing are our priority and the continuing COVID-19 pandemic may require changes to the unit schedule, learning activities, delivery modes and assessment to provide flexible and safe options to our community. Curtin will endeavour to keep changes and disruptions to a minimum at all times. For current advice and further information visit https://www.curtin.edu.au/novel-coronavirus/.

Syllabus

This unit introduces mathematical concepts relevant to business and economic applications. The unit begins with a review of foundational concepts in algebra, progressing to elementary calculus used in applications of constrained and unconstrained optimisation. The second half of the unit reviews elementary statistical concepts and techniques for statistical inference.

Introduction

The objective of this unit is to establish foundational mathematical and statistical techniques that are essential for understanding theoretical structures commonly encountered in business and economics and for analyzing and interpreting data. Basics of the statistical software R and RStudio will be introduced to develop essential skills in producing analytical reports. This course also introduces (reviews): (1) mathematical concepts relevant to business and economics applications (in the first 6 weeks), and (2) elementary statistical concepts and techniques for statistical inference. The unit is being taught assuming that you have acquired either:

1. Basic knowledge from ECOM1000; and/or
2. Mathematical knowledge from the Year 11 and 12 Mathematics Methods in the Western Australia Senior High School system or equivalent from your location.

Unit Learning Outcomes

All graduates of Curtin University achieve a set of six Graduate Capabilities during their course of study. These inform an employer that, through your studies, you have acquired discipline knowledge and a range of other skills and capabilities which employers would value in a professional setting. Each unit in your course addresses the Graduate Capabilities through a clearly identified set of learning outcomes. They form a vital part in the process referred to as assurance of learning. The learning outcomes notify you of what you are expected to know, understand or be able to do in order to be successful in this unit. Each assessment for this unit is carefully designed to test your knowledge of one or more of the unit learning outcomes. On successfully completing all of the assessments you will have achieved all of these learning outcomes.

Your course has been designed so that on graduating you will have achieved all of Curtin's Graduate Capabilities through the assurance of learning processes in each unit.

	On successful completion of this unit students can:	Graduate Capabilities addressed
1	Recognise practical business situations in which a range of statistical and mathematical techniques are applicable	
2	Present, summarise and process suitable sample data, make basic statistical inferences that lead to appropriate business interpretations with the potential to develop sophisticated mathematical models	
3	At least one current statistical software (e.g., R and RStudio, or Python, or alike) to develop technical competencies in data analysis	

Curtin's Graduate Capabilities

	Apply discipline knowledge, principles and concepts		Innovative, creative and entrepreneurial		Effective communicators with digital competency
	Globally engaged and responsive		Culturally competent to engage respectfully with local First Peoples and other diverse cultures		Industry connected and career capable
Find out more about Curtin's Graduate Capabilities here: https://www.curtin.edu.au/about/learning-teaching/					

Learning Activities

The main learning activities are as follows:

1. **Lectures**
   - Weekly lectures will be in-person, please check your calendar carefully.
2. **Tutorials**
   - Weekly tutorials will be in-person, please ensure you check your calendar carefully.
   - **You are strongly encouraged to attend the tutorials as these sessions are important (1) to reinforce concepts learned in class, and (2) building blocks to learning R software and completing your final assessment.**
   - Please bring your laptop to the tutorials.
3. **MyLab**
   - ***IMPORTANT*** YOU MUST USE your Curtin email address (ends with @curtin.edu.au) to sign up for MyLab accounts. Otherwise, you are subject to academic misconduct.**
   - **Since we are using two different textbooks for the class, please make sure you use appropriate MyLab registrations for each textbook.**
   - Homework is given via MyLab to help enhance your learning and reinforce your understanding of the unit materials and for students to practice applications of the main concepts.
   - There are also videos and help on MyLab that are very helpful.
   - **Quizzes will be done on MyLab. Please ensure that you have the appropriate login credentials to attempt these quizzes.**
   - Each student is allowed to have ONE account for Mathematics Mylab and ONE account for Statistics Mylab. You are subject to academic misconduct if you have MORE THAN ONE account for each respective Mylab.
   - You are required to complete TWO Candidate Agreement Statements (one for Mathematics Mylab and one for Statistics Mylab) for your grades to be counted towards your final grade. You would receive a zero for all Mathematics or Statistics quizzes if **BOTH WERE NOT COMPLETED**.
4. **Office/consultation hours**
   - Office hours can be used to clarify class materials, seek help, and discuss your learning activities.
   - Please ask your instructors for their time.

IMPORTANT!

- You are **strongly encouraged to attend lectures and tutorials regularly**. If you cannot attend lectures and/or tutorials, it is important to catch up by watching relevant recordings and asking for note-taking help from your classmates. In the past, students who failed or did not do well in the unit **failed to regularly attend lectures and particularly tutorials.**
- **Homework is important to enhance your understanding of the materials and to do well on quizzes, which make up 50% of your grade.**
- Depending on students' ability and learning preferences, they are **strongly encouraged** to spend *at least 10 hours (on top of 3 hours of lectures and tutorials)* on revisions and homework to understand and hopefully master the concepts learned in class.
- When you have learning and understanding issues, please do not hesitate to come to my consultation hours or arrange a one-on-one meeting with me. PLEASE DO NOT WAIT UNTIL IT IS TOO LATE!
- ATTENDANCE WILL BE TAKEN FOR BOTH LECTURE AND TUTORIALS. QR Codes will be provided for scanning at the beginning of class and tutorials.

Learning Resources

Essential texts

The required textbook(s) for this unit are:

- This textbook is used from Week 1 to Week 6 to learn mathematics:

  Haeussler, Ernest F., Richard S. Paul, and Richard J. Wood. 2018. Introductory Mathematical Analysis for Business, Economics, and the Life and Social Sciences. 14th ed. Pearson Canada.

  (ISBN/ISSN: 9780134141107)
- This textbook is used from Week 7 to Week 13 to learn statistics:

  Berenson, Mark, David M. Levine, Kathryn A. Szabat, Judith Watson, Nicola Jayne, and Martin O'Brien. 2018. Basic Business Statistics. 5th ed. Pearson Australia.

  (ISBN/ISSN: 9781488620201)

Online resources

- This textbook is used from Week 1 to Week 6 to learn mathematics:

  Haeussler, Ernest F., Richard S. Paul, and Richard J. Wood. 2018. Introductory Mathematical Analysis for Business, Economics, and the Life and Social Sciences. 14th ed. Pearson Canada.

  (https://www.pearson.com.au/products/Haeussler-Paul-Wood/Haeussler-Ernest-F-et-al/Introductory-Mathematical-Analysis-for-Business-Economics-and-the-Life-and-Social-Sciences/9780134141107?R=9780134141107)

  (ISBN/ISSN: 9780134141107)
- This textbook is used from Week 7 to Week 13 to learn statistics:

  Berenson, Mark, David M. Levine, Kathryn A. Szabat, Judith Watson, Nicola Jayne, and Martin O'Brien. 2018. Basic Business Statistics. 5th ed. Pearson Australia.

  (https://www.pearson.com.au/9781488620201)

  (ISBN/ISSN: 9781488620201)

Other resources

R and RStudio

Assessment

Assessment policy exemptions

- There are no exemptions to the assessment policy

Assessment schedule

	Task	Value %	Date Due	Unit Learning Outcome(s) Assessed	Late Assessments Accepted?*	Assessment Extensions Considered?*
1	MyLab Quizzes	50%	**Week:** Week 3, 5, 7, 9, 11, and 13 **Day:** Wednesady **Time:** 16:00 AWST	1,2	No	No
2	Project Report	50%	**Week:** Week 14 **Day:** 30 September **Time:** 9:00 AWST	1,2,3	Yes	Yes

*Please refer to the Late Assessment and the Assessment Extension sections below for specific details and conditions.

Detailed information on assessment tasks

1. **Pearson MyLab Quizzes** are based on Homework Problems extensions and are worth **50% of your final grade.** You will have **50 minutes** to complete each attempt of each quiz, and you will have two attempts for each quiz. Each quiz will be made available ONE WEEK prior to the due date. Since you will have one week to complete your quiz, PLEASE PLAN ACCORDING AS THERE WILL BE NO LATE ASSESSMENTS OR EXTENSIONS GRANTED. All six quizzes are counted towards your final grade.

Quiz	Submit by	Topics
1	Wednesday, 17/07 16:00 AWST	Math Homework 1,2: Review of Algebra and Applications
2	Wednesday, 31/07 16:00 AWST	Math Homework 2,3: Functions
3	Wednesday, 14/08 16:00 AWST	Math Homework 4: Differentiation 1
4	Wednesday, 28/08 16:00 AWST	Math Homework 5,6: Differentiation 2,3
5	Wednesday, 11/09 16:00 AWST	Stats Homework 7,8: Data, Comparing Samples
6	Wednesday, 25/09 16:00 AWST	Stats Homework 9,10: Comparing Samples

To count your grades, you must complete both Candidate Agreement Statements for Mathematics and Statistics MyLabs AND at least one quiz is completed.

- If you do not complete the Candidate Agreement Statement for Mathematics Mylab, your grades for Mathematics quizzes will not be counted towards your final grade.
- If you do not complete the Candidate Agreement Statement for Statistics Mylab, your grades for Statistics quizzes will not be counted towards your final grade.
- If you do not complete both Candidate Agreement Statements, you will be getting F-IN for the unit.

**** IMPORTANT! **Furthermore, UC reserves the right to change the due date of these quizzes to accommodate the learning pace of students.**

2. The project description, guidance, and project number will be available on ***Friday, 30/08, 2024.***

   This assessment will be submitted on **27 May at 9:00 AWST through the turnitin.com link provided on the Blackboard.**

   - **The entire assessment will need to be completed in R. Other formats will NOT be accepted.**
   - **You can ONLY SUBMIT ONCE. Otherwise, UC will consider resubmission with at least 25% deduction.**
   - **Wrong format will be deducted 20%.**
   - **Wrong stock assignment will be automatically awarded 0.**
   - If you do not complete your project using the right project number, you will automatically receive a grade of zero. Please check your project number carefully!
   - You will need to submit the pdf rendered from RStudio with recognizable text that is accepted by turnitin.com.
   - UC has the right to request the .rmd file students use to complete the assessment in RStudio.
   - This is an individual assessment; hence, *please do not collaborate with others.*
   - Nearly all the background and coding necessary to complete the project are in the Tutorials for the unit, and a small amount of independent research (on the content) may be required. Please focus on providing clear interpretations of the analysis. That is, please always tell the reader what the results of your analyses mean.

Pass requirements

Students are required to attempt and submit all assessment tasks and achieve an overall mark of 50 or above to pass the Unit.

Note:

- Assessment 1 is a continuous assessment consisting of 6 quizzes. **You will need to complete at least ONE quiz and BOTH Candidate Agreement Statements (Maths and Statistics) (1) to avoid the F-IN and (2) for your grade of Assessment 1 to be counted.**
- You may have 50% by completing all quizzes, but if you do not attempt the final assessment and submit the work, you will receive an F-IN.

Assessment Moderation

Fair assessment through moderation

Moderation describes a quality assurance process to ensure that assessments are appropriate to the learning outcomes, and that students work is evaluated consistently by assessors. Minimum standards for the moderation of assessments are described in the Assessment and Student Progression Manual, available from https://www.curtin.edu.au/about/governance/compliance-legal/find-a-policy/

Pre-marking moderation

During course review processes the assessment design and management of the task related to moderation practices are considered. Planned tasks are reviewed against the unit learning outcomes and syllabus, and the fairness of the assessment judged. When a new assessment is planned, outside of the course review process, the Unit Coordinator (UC) discusses the assessment design and marking guide with the unit's co-assessor and other teaching staff. The UC and the co-assessor discuss and finalise the content of all assessments before release to students. Marking guides or rubrics are developed by the UC and co-assessor to ensure consistent marking practices. The requirements of the assessment task are clearly communicated to students.

Intra-marking / Post-marking moderation

The following intra-marking moderation practices are employed in this unit:

Where there are multiple staff marking assessments, the UC will ensure consistency across markers during the marking process. A random selection of assessment submissions are assessed independently by two or more markers and the graded work compared. Where differences occur, strategies will be adopted to ensure consistency of marking.

The following post-marking moderation practices are employed in this unit:

A sample of marked assessment are "second marked" to ensure consistency across markers and locations. The unit coordinator conducts a review of the marked assessments prior to the release of marks to students. This may involve:

1. Statistical analysis - The marks are analysed to see if there are variations in the marks.

2. Check outliers - Identify extreme 'high' and 'low' scoring assessments to check marking.

3. Check borderline assessments - Identify borderline pass or fails to check marking. The unit coordinator will also check for the extent and consistency of feedback provision. Students are invited to review their papers and if any inconsistencies are apparent to discuss with the unit coordinator

Late assessment

Where the submission of a late assessment is permitted, late penalties will be consistently applied in this unit.

Where a late assessment **is** permitted for an assessment item or the entirety of the unit (refer to the Assessment Schedule table in this Unit Outline) and the student does not have an approved assessment extension:

1. For assessment items submitted within the first 24 hours after the due date/time, students will be penalised by a deduction of 5% of the total marks allocated for the assessment task;
2. For each additional 24 hour period commenced an additional penalty of 10% of the total marks allocated for the assessment item will be deducted; and
3. Assessment items submitted more than 168 hours late (7 calendar days) will receive a mark of zero.

Where late assessment **is NOT** permitted for an assessment item or the entirety of the unit (refer to the Assessment Schedule table in this Unit Outline) and the student does not have an approved assessment extension:

1. All assessment items submitted after the due date/time will receive a mark of zero.

Assessment extension

Where an application for an assessment extension **is** permitted for an assessment item(s) within this unit (refer to the Assessment Schedule table in this Unit Outline):

1. A student who is unable to complete an assessment item by/on the due date/time as a result of exceptional circumstances beyond the student's control, may apply for an assessment extension on the Assessment Extension Application Form as prescribed by the Academic Registrar. The form is available on the Forms page at https://students.curtin.edu.au/essentials/forms-documents/forms/ and also within the student's OASIS (My Studies tab – Quick Forms) account.
2. The student will be expected to submit their application for an Assessment Extension with supporting documentation via the online form.
3. Timely submission of this information supports the assessment process. For applications that are declined, delayed submission may have significant ramifications on the possible marks awarded.
4. An application may be accepted up to five working days after the due date/time of the assessment item where the student is able to provide a verifiable explanation as to why they were not able to submit the application prior to the assessment due date/time

Where an application for an assessment extension **is NOT** permitted for an assessment item(s) within this unit (refer to the Assessment Schedule table in this Unit Outline):

1. All assessment items submitted after the due date/time will be subject to late penalties or receive a mark of zero depending on the unit permitting late assessment submissions.

Deferred assessments

If your results show that you have been granted a deferred assessment you should immediately check OASIS for details.

Further assessment

Further assessments, if granted by the Board of Examiners, will be held between 28/10/2024 and 08/11/2024 . Notification to students will be made after the Board of Examiners meeting via the Official Communications Channel in OASIS.

It is the responsibility of the student to be available to complete the requirements of a further assessment. If your results show that you have been granted a further assessment you should immediately check OASIS for details.

Reasonable adjustments for students with disabilities/health circumstances likely to impact on studies

A Curtin Access Plan (CAP) is a document that outlines the type and level of support required by a student with a disability or health condition to have equitable access to their studies at Curtin. Carers for people with disability may also be eligible for support. This support can include alternative exam or test arrangements, study materials in accessible formats, access to Curtin's facilities and services or other support as discussed with an advisor from AccessAbility Services.

Documentation is required from your treating Health Professional to confirm your health circumstances or carer responsibilities.

If you think you may be eligible for a CAP, please contact AccessAbility Services. If you already have a CAP please provide it to the Unit Coordinator in week 1 of each study period.

Referencing style

The referencing style for this unit is Chicago 17th Author-Date.

More information can be found on this style from the Library web site:
https://libguides.library.curtin.edu.au/uniskills/referencing/chicago17.

Privacy

As part of a learning or assessment activity, or class participation, your image or voice may be recorded or transmitted by equipment and systems operated by Curtin University. Transmission may be to other venues on campus or to others both in Australia and overseas.

Your image or voice may also be recorded by students on personal equipment for individual or group study or assessment purposes. Such recordings may not be reproduced or uploaded to a publicly accessible web environment. If you wish to make such recordings for study purposes as a courtesy you should always seek the permission of those who are impacted by the recording.

Recording of classes or course materials may not be exchanged or distributed for commercial purposes, for compensation, or for any other purpose other than personal study for the enrolled students in the unit. Breach of this may subject a student to disciplinary action under Statute No 10 – Student Disciplinary Statute.

If you wish to discuss this please talk to your Unit Coordinator.

Copyright

Academic Integrity (including plagiarism and cheating)

Academic Integrity

Curtin's Student Charter, Academic Integrity Program (AIP), and core Values guide expectations regarding student behaviour and responsibilities. Information on these topics can be found on the Academic Integrity Website.

Academic Integrity Warnings

An Academic Integrity Warning may be issued to a student in limited circumstances and only where misconduct is not involved.

Academic Misconduct

Staff members are required to report poor academic practice and suspected misconduct. Academic Misconduct means conduct by a student that is dishonest or unfair in connection with any academic work. This includes all types of plagiarism, cheating, collusion, falsification or fabrication of content, and behaviours like falsifying medical certificates for extension. Contract cheating, the use of file sharing, translation services/apps, paraphrasing tools (text-spinners), article generators, and assignment help websites also may be considered academic misconduct.

Check your assessment instructions carefully before using any generative artificial intelligence (Gen-AI) software (e.g. Chat GPT, Midjourney, GitHub Copilot, etc.). You are not permitted to use Gen-AI software in any assessment task unless written permission is explicitly granted by the Unit Coordinator (e.g. within Blackboard or the assignment specifications). If the use of Gen-AI software has been approved, you must document its use, apply appropriate acknowledgement and attribution rules, and include a statement as to the nature and extent of the use when submitting the assessment. Unapproved, inappropriate, or undisclosed use may be dishonest or unfair behaviour, and thus considered misconduct. For further information on the use of Gen-AI software see the Academic Integrity Website.

The longer term personal, social, and financial consequences of misconduct can be severe, so please ask your tutors or unit coordinator if you need clarification or are unsure what to do. If your work is the subject of an inquiry, you will be given an opportunity to respond and appropriate support will be provided. Academic work under inquiry will not be graded until the process has concluded. Penalties for misconduct may include a warning, a reduced or nil grade, a requirement to repeat the assessment, an annulled grade (ANN) or termination from the course. For more information refer to Statute No.10 Student Discipline and Academic Misconduct Rules.

Information and Communications Technology (ICT) Expectations

Curtin students are expected to have reliable internet access in order to connect to OASIS email and learning systems such as Blackboard and Library Services.

You may also require a computer or mobile device for preparing and submitting your work.

1. R and RStudio will be taught and used in this class.
2. You will need to read the guidelines for iLectures and Blackboard.

For general ICT assistance, in the first instance please contact OASIS Student Support: oasisapps.curtin.edu.au/help/general/support.cfm

For specific assistance with any of the items listed below, please visit UniSkills and the IT tools and guides webpage.

- Using Blackboard, the I Drive and Back-Up files
- Introduction to PowerPoint, Word and Excel

Additional information

Please pay attention to the following additional information:

1. Inquiries via phone WILL NOT BE RESPONDED.
2. In order to communicate with the UC, instructors and sessional staff, students have to use the official Curtin University email address. Other emails ending with anything other than @curtin.edu.au WILL NOT BE RESPONDED.
    - **Please allow at least 1 - 2 business days for a response to your email**
3. Depending on students' ability and learning preferences, they are **strongly encouraged** to spend *at least 10 hours (on top of 3 hours of lectures and tutorials)* on revisions and homework to understand and hopefully master the concepts learned in class.
4. When you have learning and understanding issues, please do not hesitate to seek help by attending my consultation hours or arranging a one-on-one meeting with me. PLEASE DO NOT WAIT UNTIL IT IS TOO LATE!

Enrolment

It is your responsibility to ensure that your enrolment is correct - you can check your enrolment through the eStudent option on OASIS, where you can also print an Enrolment Advice.

Student Rights and Responsibilities

It is the responsibility of every student to be aware of all relevant legislation, policies and procedures relating to their rights and responsibilities as a student. These include:

- the Student Charter
- Values and Signature Behaviours
- the University's policy and statements on plagiarism and academic integrity
- copyright principles and responsibilities
- the University's policies on appropriate use of software and computer facilities

Information on all of the above is available through the University's "Student Rights and Responsibilities" website at: students.curtin.edu.au/rights.

Note: In Australia and other jurisdictions, students are required to complete a screening check prior to undertaking any activities that include children (e.g. surveying children at a school as part of a project). If this applies to you, start by contacting your unit coordinator for advice.

Student Equity

There are a number of factors that might disadvantage some students from participating in their studies or assessments to the best of their ability, under standard conditions. These factors may include a disability or medical condition (e.g. mental illness, chronic illness, physical or sensory disability, learning disability), significant caring responsibilities, pregnancy, religious practices, living in a remote location,or another reason. If you believe you may be unfairly disadvantaged on these or other grounds please contact the appropriate service below. It is important to note that the staff of the University may not be able to meet your needs if they are not informed of your individual circumstances, so please get in touch with the appropriate service if you require assistance.

To discuss your needs in relation to:

- Disability or medical conditions, contact AccessAbility Services: https://students.curtin.edu.au/personal-support/disability/
- Elite athletes, contact Elite Athlete Coordinator: https://stadium.curtin.edu.au/sport/academy/elite-athlete-program/
- All other grounds, contact the Student Wellbeing Advisory Service: https://students.curtin.edu.au/personal-support/counselling-guidance/wellbeing/

Recent Unit Changes & Response to Student Feedback

Students are encouraged to provide feedback through student surveys (such as Insight (Curtin's new unit and teaching survey developed in collaboration with students and staff) and the annual Student Experience Survey) and interactions with teaching staff.

Listed below are some recent changes to the unit as a result of student feedback.

N/A

Program calendar

Program Calendar – Semester 1 2024

Week	Begin Date	Lecture Material (BB Materials Folder)	MyLab Homework (2 Courses: MATH and STATS: Separate registration codes)	Tutorial Topic	Assessment (MyLab Quizzes open 1 week in advance and are due Wednesday by 4PM AWST)
Orientation					
1.	1 July	Review of Algebra **(H: Chapter 0)**	MATH: Topic 1	**Introduction:** Install R and RStudio	
2.	8 July	Functions **(H: Ch 0,1,2)**	MATH: Topic 2	**Tutorial 1:** Review of Algebra, using the RStudio Console	Quiz 1 opens
3.	15 July	Graphs, Exponential and Logarithmic Functions **(H: Ch 2,3,4)**	MATH: Topic 3	**Tutorial 2:** Functions, RStudio Projects, R Scripts and Functions	**Quiz 1: Based on MATH Topics 1,2**
4.	22 July	Differentiation 1 **(H: Ch 11)**	MATH: Topic 4	**Tutorial 3:** Graphs, Exponential and Logarithmic Functions: Plotting functions in RStudio	Quiz 2 opens
5.	29 July	Differentiation 2 **(H: Ch 12)**	MATH: Topic 5	**Tutorial 4:** Differentiation	**Quiz 2: Based on MATH Topics 2,3**
6.	5 Aug	**Tuition free week** (Quiz 3 opens)			
7.	12 Aug	Differentiation 3 **(H: Ch 13)**	MATH: Topic 6	**Tutorial 5:** Differentiation, Introduction to R Markdown Documents	**Quiz 3: Based on MATH Topics 4**
8.	19 Aug	Data **(B: Ch 1-3)**	STATS: Topic 7 (Note this is a different MyLab course)	**Tutorial 6:** Optimisation (including portfolio optimisation), RMarkdown: more formatting output for HTML	Quiz 4 opens
9.	26 Aug	Comparing Samples of Data 1 **(B: Ch 8,9)**	STATS: Topic 8	**Tutorial 7:** Summary statistics. Importing stock data, bookdown for formatting output.	**Description and guidance of final assessments will be made available on Friday 30/08/2024.** **Quiz 4: Based on MATH Topics 5,6**
10.	2 Sep	Comparing Samples of Data 2 **(B: Ch 10,11)**	STATS: Topic 9	**Tutorial 8:** Loading stock price data, confidence intervals, one sample hypothesis tests, generating PDFs with RMarkdown	Quiz 5 opens

11.	9 Sep	Comparing Samples of Data 3 **(B: Ch 19)**	STATS: Topic 10	**Tutorial 9:** Hypothesis tests, loading stock price data, generating PDFS	**Quiz 5: Based on STATS Topics 7,8**
12.	16 Sep	Introduction to Linear Regression **(B: Ch 12)** (Time Permitted)	STATS: Topic 11	**Tutorial 10:** Hypothesis tests, importing data	Quiz 6 opens
13.	23 Sep	Multiple Regression **(B: Ch 13)** (Time permitted)	STATS: Topic 12	**Tutorial 11:** Running, presenting and interpreting regression results	**Quiz 6: Based on STATS Topics 9,10**
14.	**30 Sept - 7 Oct**	**Final Term Project is due at 9:00 AWST on 30 September 2024** • **You have to submit the pdf with recognizable texts knitted from RStudio** • **The UC reserves the right to request .rmd file** • **The entire assessment will need to be completed in R and RStudio, other formats will NOT be accepted.**			

Textbook references:

For Math (Week 1-6) (**H Chapters**)

Haeussler, Ernest F., Richard S. Paul, and Richard J. Wood. 2018. Introductory Mathematical Analysis for Business, Economics, and the Life and Social Sciences. 14th ed. Pearson Canada.

For Statistics (Weeks 7-12) (**B Chapters**)

Berenson, Mark, David M. Levine, Kathryn A. Szabat, Judith Watson, Nicola Jayne, and Martin O'Brien. 2018. Basic Business Statistics. 5th ed. Pearson Australia.

Both of the above texts can be purchased as electronic versions from Pearson and linked to your MyLab account for direct reference within the Homework sets.

Pearson MyLab Quizzes are based on Homework Problems extensions and are worth **50% of your final grade.** You will have **50 minutes** to complete each attempt of each quiz, and you will have two attempts for each quiz. Each quiz will be made available ONE WEEK prior to the due date. Since you will have one week to complete your quiz, PLEASE PLAN ACCORDING AS THERE WILL BE NO LATE ASSESSMENTS OR EXTENSIONS GRANTED. All six quizzes are counted towards your final grade.

Quiz	Submit by	Topics
1	Wednesday, 17/07 16:00 AWST	Math Homework 1,2: Review of Algebra and Applications
2	Wednesday, 31/07 16:00 AWST	Math Homework 2,3: Functions
3	Wednesday, 14/08 16:00 AWST	Math Homework 4: Differentiation 1
4	Wednesday, 28/08 16:00 AWST	Math Homework 5,6: Differentiation 2,3
5	Wednesday, 11/09 16:00 AWST	Stats Homework 7,8: Data, Comparing Samples
6	Wednesday, 23/09 16:00 AWST	Stats Homework 9,10: Comparing Samples, Linear Regression

You are required to complete (1) both Candidate Agreement Statements for both Mathematics and Statistics MyLabs, and (2) at least one quiz for your grades to be counted.

- If you do not complete the Candidate Agreement Statement for Mathematics Mylab, your grades for Mathematics quizzes will not be counted towards your final grade.
- If you do not complete the Candidate Agreement Statement for Statistics Mylab, your grades for Statistics quizzes will not be counted towards your final grade.
- If you do not complete both Candidate Agreement Statements, you will be getting F-IN for the unit.

Note: The UC reserves the right to change the pace of the course by changing the readings and materials to cope with students' learning ability and progress. The final program schedule will be posted on Blackboard.