FPMT004

Intermediate Mathematics 2

IBT1 2015

Macquarie City Campus

Contents

General Information

Unit convenor and teaching staff
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Credit points
3

Prerequisites
FPMT003

Corequisites

Co-badged status

Unit description
The purpose of this course, in conjunction with FPMT003, is to provide the background necessary to study undergraduate business subjects which require some applications of mathematics such as accounting or economics and to prepare the student for intermediate first year mathematics courses such as MATH123 or MATH130. This course deals with the fundamentals of mathematics; beginning with arithmetic and geometric progressions and their applications to real world situations especially finance. The fundamentals of differential calculus for logarithmic, exponential and polynomial functions are explored. Basic integration techniques, probability, normal distribution and linear modelling are also examined in depth. This is an applied course and examples from a diverse range of applications will be considered.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

Effectively use a scientific calculator and use the operations of basic algebra, percentages and equations of degree one, form equations and word equations.
Recognise arithmetic and geometric progressions, and distinguish between a sequence and a series. Apply arithmetic and geometric progressions to solve problems involving progressions in finance, typically superannuation, reducible interest and annuities and other situations.
Differentiate polynomial functions and apply the laws of differentiation. Differentiate exponential and logarithmic functions. Recognise and sketch exponential and logarithmic functions, and apply differentiation to curve sketching.
Appreciate the concept of integration by first principles. Recognise when an integral is an area and when it is not. Apply standard rules to find areas under the curves, and interpret these areas. Integrate polynomial functions, exponential and logarithmic functions and apply these integral to physical problems.
Solve problems involving application of calculus. Apply the concepts of differentiation to solve optimisation problems that are based on physical, financial or real world situations.
Apply the concept of integration to solve and model physical phenomena.
Use laws of Probability and tree diagrams to determine the likelihood of events.
Calculate standard deviation and use the normal distribution and standard normal distribution in conjunction with Z scores to compare distributions & apply standard deviation concepts to problem solving.

General Assessment Information

Missed Assessments

The only exception to not sitting an in-class test or examination at the designated time or handing in an assessment on the due date is because of a serious or unavoidable disruption.

Students who miss a formal assessment held in class or a final examination due to a serious and unavoidable disruption which commenced after the start of the study period must lodge a Disruption to Studies Notification via ask.mq.edu.au within five (5) working days of the commencement of the disruption in order to apply for Special Consideration. The notification must be supported by appropriate evidence.

In submitting a Disruption to Studies Notification, a student is acknowledging that they may be required to undertake additional work. The time and date, deadline or format of any required extra assessable work as a result of a Disruption to Studies Notification is not negotiable. Further, in submitting a Disruption to Studies Notification, a student is agreeing to make themselves available so that they can complete any extra work as required.

Students will be advised of the outcome of their Disruption to Studies Application via ask.mq.edu.au.

Please refer to the Disruption to Studies Policy for further details.

Extensions & Late Submissions

To apply for an extension of time for submission of an assessment item, students must submit a notification of Disruptions to Studies via ask.mq.edu.au.

Grounds for extensions are usually serious illness, accident, disability, bereavement or other compassionate circumstances and must be substantiated with relevant evidence (e.g. professional authority form).

Late submissions without an approved extension will be penalised at a rate of **10% per day (weekend inclusive)**. This applies to assessments completed outside of class such as essays and assignments.

Final Examinations and Final Assessment Tasks

inal exams and final assessments typically take place in Week 13 and the first 3 days of week 14. **Please note that you must pass the final exam or final assessment task in order to pass this unit**.You are expected to present yourself for examination at the time and place designated in the Final Examination Timetable. Please note that no special consideration will be given to students who have booked flights out of the country prior to the conclusion of the examination period.

The Final Examination Timetable will be available in provisional form on the MQC Student Portal Noticeboard at https://student.mqc.edu.au/NoticeBoard.htm in approximately week 10 of this Session. You will have 1 week to give feedback to the Student Administration Manager should you have concerns or note any clashes in your final exam timetable. From week 12, you will also be able to view your personal final exam timetable via the MQC Student Portal.

The examination timetable is produced to provide the maximum number of students with the least number of consecutive examinations. It is not uncommon for students of Macquarie University at both the City and North Ryde Campuses to be required to sit two consecutive examinations. A maximum of three consecutive exams is also permitted (for example, two on one day, and one the following morning). However, no student is required to sit four consecutive exams and if any student discovers their examination timetable contains four consecutive exams, they should immediately contact the Student Administration Manager to have an exam rescheduled.

Prior to the examination period, you should ensure that you are familiar with the Examination Rules. You can find these under Exam Information on the MQC Student Portal Noticeboard. A

breach in any of these rules will lead to disciplinary action being undertaken.

Students who miss a final exam or final assessment will be awarded a mark of 0 for the task and cannot pass the unit, except for cases where a Disruption to Studies Notification is lodged and a Special Consideration is awarded. Please note that in submitting a Disruption to Studies Notification, a student is acknowledging that they may be required to undertake additional work. The time and date, deadline or format of any required extra assessable work as a result of a Disruption to Studies Notification is not negotiable.

Supplementary Examinations

Supplementary final examinations are held during the scheduled Supplementary Final exam Period in the lead up to the subsequent teaching period.

Please note that results for supplementary exams may not be available until the conclusion of Week 2 of the subsequent teaching session and until supplementary results are released, continuing students may be prevented from enrolling in certain units in the subsequent teaching session.

Students in their final semester of study who undertake supplementary final exams should note that Formal Completion of the Foundation Program will not be possible until supplementary results are released and this may impact on their ability to enrol subsequent programs of study on time.

Retention of Originals

It is the responsibility of the student to retain a copy of any work submitted and produce another copy of all work submitted if requested. Copies should be retained until after the release of final results each Session.

In the event that a student is asked to produce another copy of work submitted and is unable to do so, they may be awarded zero (0) for that particular assessment task.

The University also reserves the right to request and retain the originals of any documentation/ evidence submitted to support notifications of disruptions to studies. Requests for original documentation will be sent to the applicant's University email address within six (6) months of notification by the student. Students must retain all original documentation for the duration of this six (6) month period and must supply original documents to the University within ten (10) working days of such a request being made.

Turnitin

Students may be requested to submit assessments via Turnitin and in such instances any hard copies submitted without a Turnitin Report will not be marked.

Step by step guidance for Turnitin submissions can be found here. Should you experience any difficulties with Turnitin submission, please see a Lab Demonstrator in Lab 311 at MQC.

If you experience difficulties submitting through Turnitin on the due date, you must email your work in electronic format to your lecturer using the email address provided in the unit guide. Late submissions will be penalised at 10% per day.

Grading & Requirements to pass

This unit will use the following grading system:

- HD - High Distinction (85-100)
- D – Distinction (75-84)
- CR – Credit (65-74)
- P – Pass (50-64)
- F – Fail (0-49)

Grade descriptors and other information concerning grading are contained in the Macquarie University Grading Policy which is available here.

To pass this unit, you must attempt all assessable components of the unit, pass the final exam and attain an overall mark of at least 50%. Failure to do so will result in an F (fail) grade being recorded.

Please note that this is a level 2 elective unit. **All** attempts at a level 2 elective unit will count towards your Macquarie University Average (MQA), including failed and withdraw fail results. If you academic advice, please see a Student Adviser prior to the Academic Penalty Date (Friday Week 8).

For further information on progression to an Undergraduate degree, please see ***Progression into Undergraduate studies*** section below.

Provision of Feedback

Marks awarded for assessment items will generally be available within fourteen (14) days of the due date.

If you wish to receive further feedback from your instructor, you should contact them directly using the contact details provided in this guide.

Students may seek general feedback about their performance in a unit up to 6 months following results release.

Contacting Staff and Getting Help

Foundation students may approach teaching staff for one-on-one help in one of three ways:

- During Consultation sessions. For details about consultation sessions and Consultation times, please refer to timetabled provided on the Macquarie City Campus Portal Noticeboard.
- Using the "Questions for your instructor" dialogue provided in Week 0 of the respective unit in iLearn.
- Using the instructor’s email address provided in the Unit Guide of the respective unit.

For all university related correspondence, students are required to use their official MQ student

email account which may be accessed via the Macquarie University Student Portal. Inquiries from personal email accounts will not be replied to.

Assessment Tasks

Name	Weighting	Due
Test 1	20%	Week 5
Group Project	10%	Week 7-8
Test 2	20%	Week 10
Participation	10%	Ongoing
Final Examination	40%	Examination Period

Test 1

Due: **Week 5**
Weighting: **20%**

The first assessment task will be a written examination on the first 4 topics. It will be 1 hour long.

On successful completion you will be able to:

- Effectively use a scientific calculator and use the operations of basic algebra, percentages and equations of degree one, form equations and word equations.
- Recognise arithmetic and geometric progressions, and distinguish between a sequence and a series. Apply arithmetic and geometric progressions to solve problems involving progressions in finance, typically superannuation, reducible interest and annuities and other situations.

Group Project

Due: **Week 7-8**
Weighting: **10%**

The second assessment task will be a group project, which will be based on the first 6 topics in the course. Students will be placed into small groups, and given a specific problem to solve. They will be required to carry out research during and outside of class time, and will need to present their projects to the class in week 8. Late submissions will be penalised at 10% per day.

On successful completion you will be able to:

- Differentiate polynomial functions and apply the laws of differentiation. Differentiate exponential and logarithmic functions. Recognise and sketch exponential and logarithmic

functions, and apply differentiation to curve sketching.

- Appreciate the concept of integration by first principles. Recognise when an integral is an area and when it is not. Apply standard rules to find areas under the curves, and interpret these areas. Integrate polynomial functions, exponential and logarithmic functions and apply these integral to physical problems.

Test 2

Due: **Week 10**
Weighting: **20%**

The fourth assessment task will be a written examination on the first 9 topics with emphasis on topics 6, 7, 8, and 9. It will be 1 hour long.

On successful completion you will be able to:

- Effectively use a scientific calculator and use the operations of basic algebra, percentages and equations of degree one, form equations and word equations.
- Differentiate polynomial functions and apply the laws of differentiation. Differentiate exponential and logarithmic functions. Recognise and sketch exponential and logarithmic functions, and apply differentiation to curve sketching.
- Appreciate the concept of integration by first principles. Recognise when an integral is an area and when it is not. Apply standard rules to find areas under the curves, and interpret these areas. Integrate polynomial functions, exponential and logarithmic functions and apply these integral to physical problems.

Participation

Due: **Ongoing**
Weighting: **10%**

Students will be assessed on participation in classes and activities throughout the semester. Participation will entail attendance, punctuality, contribution to class discussions, completion of set class and homework activities, asking and answering questions, and adhering to the MQC and Macquarie University Student Codes of Conduct. A comprehensive guide outlining Participation marking criteria will be provided on iLearn.

On successful completion you will be able to:

- Effectively use a scientific calculator and use the operations of basic algebra, percentages and equations of degree one, form equations and word equations.
- Recognise arithmetic and geometric progressions, and distinguish between a sequence and a series. Apply arithmetic and geometric progressions to solve problems involving

progressions in finance, typically superannuation, reducible interest and annuities and other situations.

- Differentiate polynomial functions and apply the laws of differentiation. Differentiate exponential and logarithmic functions. Recognise and sketch exponential and logarithmic functions, and apply differentiation to curve sketching.
- Appreciate the concept of integration by first principles. Recognise when an integral is an area and when it is not. Apply standard rules to find areas under the curves, and interpret these areas. Integrate polynomial functions, exponential and logarithmic functions and apply these integral to physical problems.
- Solve problems involving application of calculus. Apply the concepts of differentiation to solve optimisation problems that are based on physical, financial or real world situations. Apply the concept of integration to solve and model physical phenomena.
- Use laws of Probability and tree diagrams to determine the likelihood of events. Calculate standard deviation and use the normal distribution and standard normal distribution in conjunction with Z scores to compare distributions & apply standard deviation concepts to problem solving.

Final Examination

Due: **Examination Period**
Weighting: **40%**

This will consist of a single paper of 3 hours duration, in the final examination period. The paper will contain both calculative and theory questions, based on all the learning outcomes of the unit. The final exam will be held during the final examination period in either Week 13 or 14 at the City Campus. **Please note that you must pass the final exam in order to pass this unit.**

On successful completion you will be able to:

- Effectively use a scientific calculator and use the operations of basic algebra, percentages and equations of degree one, form equations and word equations.
- Recognise arithmetic and geometric progressions, and distinguish between a sequence and a series. Apply arithmetic and geometric progressions to solve problems involving progressions in finance, typically superannuation, reducible interest and annuities and other situations.
- Differentiate polynomial functions and apply the laws of differentiation. Differentiate exponential and logarithmic functions. Recognise and sketch exponential and logarithmic functions, and apply differentiation to curve sketching.
- Appreciate the concept of integration by first principles. Recognise when an integral is an area and when it is not. Apply standard rules to find areas under the curves, and

interpret these areas. Integrate polynomial functions, exponential and logarithmic functions and apply these integral to physical problems.

- Solve problems involving application of calculus. Apply the concepts of differentiation to solve optimisation problems that are based on physical, financial or real world situations. Apply the concept of integration to solve and model physical phenomena.
- Use laws of Probability and tree diagrams to determine the likelihood of events. Calculate standard deviation and use the normal distribution and standard normal distribution in conjunction with Z scores to compare distributions & apply standard deviation concepts to problem solving.

Delivery and Resources

Classes

Weekly contact will be 5 hours consisting of a 2 hour lecture, a 2 hour tutorial and 1 hour consultation session.

During Lectures, new content will typically be presented and explained by the lecturer. During tutorials participants will have more opportunities to engage in discussion and activities.

In the one-hour consultation session, students will be given individual guidance and assistance with their assessment and homework tasks and assignments. This hour is also an opportunity for students to engage in independent research and reading related to the unit, complete additional tasks to extend their knowledge of the field or catch up on any work they have missed.

Attendance of all three sessions (lectures, tutorials and consultation sessions) is compulsory and students must attend at least one consultation session per week.

Timetables for lectures and tutorials as well as consultation sessions can be found on the Noticeboard on the City Campus Student Portal.

If any scheduled class falls on a public holiday a make-up lesson may be scheduled, usually on a Saturday. Where appropriate, the instructor may instead organise an online make-up lesson which would require students to access online learning materials and/or complete activities outside of class rather than attending a make-up lesson. Scheduled make-up days are noted in the Teaching Schedule and attendance is taken for both weekend and online make-up lessons.

Learning and Teaching Activities

This unit will require students to complete pre-set practical exercises based on material discussed in lectures and tutorials. Students will be required to work independently as well as in small groups and engage in class discussions.

It is expected that all students purchase the prescribed text and read in advance to ensure that they are well prepared for the content covered in each lecture. If you would like to use an electronic version of the text, please inform your lecturer at the beginning of the lesson.

iLearn will also be used to post lecture and tutorial materials and also communicate with students

so it is expected that students will check this resource on a regular basis.

iLearn

iLearn is Macquarie's online learning management systems. The following unit specific information will be available on the website:

- Announcements
- Staff contact details
- Lecture notes and recordings
- Learning and teaching activities and resources
- Assessment information
- Tutorial questions and solutions
- Assessment submission tools such as Turnitin
- Other relevant material

Please note that you must enrol in a unit via eStudent in gain access to the unit in iLearn.

You are required to regularly check the website and use it as an information and resource centre to assist with your learning.

Ensure that when you have finished using the website, you log out. Failure to do so could allow unauthorised access to your account.

Please contact the IT helpdesk (Ph. 02 9850 4357) or lodge a ticket using OneHelp if you need assistance accessing iLearn.

Required and Recommended Texts and Materials

Prescribed textbook(s):

- *Maths in Focus Second Edition Mathematics HSC Course (2 Unit), Margaret Grove, Cengage Learning Australia, ISBN: 9780170226523*

All prescribed textbooks will be made available to students to purchase at the Phillip Street Coop Bookshop. Students can view a full list of textbooks for all units on the Macquarie City Campus Student Portal Noticeboard at https://student.mqc.edu.au/NoticeBoard.htm.

Recommended textbook(s):

- *Maths in focus: mathematics preliminary course / 2nd Edition,* Mathematics Preliminary Course (2 Unit), Margaret Grove, Publisher McGraw Hill, ISBN-10:0170197794
- *New Century Maths 11: Mathematics Workbook Preliminary, 1st Edition*, Trisha Brown and Robert Yen, Nelson Secondary (2007) - ISBN-10:0170130452
- *New Century Maths 12: Mathematics Workbook HSC, 1st Edition,* Trisha Brown and Robert Yen, Nelson Secondary (2007) - ISBN-10:0170130460
- *Modern Statistics: A graphical introduction*, McNeil and Middledorp Pearson, Australia

Technology Used and Required

Outside of class, students will need internet access and access to a computer capable of running a recent spreadsheet package such as Microsoft Excel 2010/2007 as well as a word processing package such as Microsoft Word 2010/2007. The data analysis package provided by Macquarie University, as an add-in to Microsoft Excel, may be used in the Macquarie City Campus Computer Labs (210, 307, 311, 608).

Non-programmable calculators are an essential tool required in this unit and every student is expected to have an approved calculator. The CASIO fx-82AU PLUS or the CASIO fx-100AU are recommended. These calculators are in very common usage and can be obtained from the University Co-op bookshop, other bookshops and newsagents. Please see full list of Board of Studies approved calculators.

Calculators with graphics capabilities or programmable calculators are not permitted to be used in examinations. Please check with your lecturer. Any student found in an examination or test using a non-approved calculator will have the device confiscated and relevant penalties for academic misconduct will be applied.

iLearn will be utilised to put up lecture slides and additional resources, so students should login to http://ilearn.mq.edu.au on a regular basis.

Unit Schedule

Week Beginning:	Topic	Readings
Week 1 Mon 23 February	Arithmetic Progressions and Geometric Progressions	A selection of questions from the textbook (Grove HSC 2 Unit) Ch7 Ex 7.1 (identify series) 7.2 (apply series formulae) 7.3 (Sigma notation), 7.4, 7.5 (A.P's) 7.6 to 7.8 GP's.
Week 2 Mon 2 March	A.P. and G.P concepts and real world situations.	Ex 7.9 Physical applications of series, 7.10 Financial applications of G.P's, 7.11 annuities and superannuation 7.12 repayments (reducible interest).
Week 3 Mon 9 March	To use the Laws of Differentiation and polynomial integration. Differentiation of Logarithmic and exponential functions. **Students to calculate their current MQA and note marks required in remaining Level 2 elective units** in order to achieve entry score for their preferred degree. Refer to http://www.foundationstudies.mq.edu.au/exit-requirements.html	Review of the product rule, the quotient rule and the function of a function rule for polynomial functions. Selection of exercises from 8.8 to 8.10 of the preliminary maths in focus text. Ex 4.4 - 4.6 as a review of logarithms and log laws and index laws. Ex 4.1, 4.2 differentiation and curve sketching of exponential functions. Ex 4.7 logarithmic functions.
Week 4 Mon 16 March	Introduction to Integration as the inverse of differentiation (Primitive function Ex 2.11).	Introduction to Integration as the inverse of differentiation (Primitive function Ex 2.11).

Week 5 Mon 23 March	Integration of polynomial, logarithmic and exponential functions.	Ex 4.3 integration of exponential functions. Ex 4.8 integration of logarithmic functions **Test 1**
Week 6 Mon 30 March	Tangents to curves and curve sketching.	Ex 2.1 to 2.7 curve sketching. Ex 2.7 simpler problems associated with single concepts such as stationary points and local maxima and local minima.
Week 7 Tue 7 April	Trapezoidal Rule and Simpson's Rule to the problem of area. Integration from first principles.	Ex 3.1 and 3.2 with emphasis on the expression and multiple applications approached from repeated application of the expression for a single application rather than a generalised expression for n strips. An examination of the trapezoidal rule and Simpsons Rule. **Group Project Starts**
Week 8 Mon 13 April	The laws of Probability, tree diagrams and the likelihood of events.	Ex 8.1 to 8.5. The complement of an event and applications to business via expected value and weighted averages as well as the concept that the total probability is one. **Group Project Due**
Week 9 Mon 20 April	To apply the normal distribution, the standard normal distribution and z scores to probability.	Worksheet will illustrate the method of converting from a z score to a probability via a z score and the reverse and applications in actuarial studies and insurance (morbidity tables etc) will be presented. Worksheets will be provided.
Week 10 Mon 27 April	Maxima and Minima problems.	Ex 2.7 and emphasis on exercises from Ex 2.8 to 2.10. **Test 2**
Week 11 Mon 4 May	Calculus and the physical world. Practice final exam paper.	Ex 6.1 and 6.2 provide a variety of applications to the physical world in terms of rates of change and exponential growth and decay. Growth and decay can be linked to compound interest and depreciation**.**
Week 12 Mon 11 May	Revision	A review of the course with the emphasis on exam preparation. Complete LEU surveys in class
Week 13 Mon 18 May	**Revision & Final Exam** (Final Exams may be Held in Week 13 or 14, during the scheduled final exam period. Please refer to the Information Provided on the Portal Noticeboard). **Please note that you must pass the final exam in order to pass this unit.**	

Other Important Dates

Public holidays & make-up days

Good Friday Make-up: Saturday 28 March

Easter Monday Make-up: Saturday 11 April

(Please note that online lessons may be organised in lieu of make-up day).

Census Dates

Financial Census Date (last day to withdraw without financial penalty) - Friday Week 4, 20 March

Academic Census Date (last day to withdraw without academic penalty) - Friday Week 8, 17 April

Exam Period:

Monday 18 May 2015 – Wednesday 27 May 2015 inclusive.

Results Release:

Session 1 2015 results are scheduled to be released to students via e-Student and MQC Student Portal

on Friday 12 June 2015

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central. Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy http://mq.edu.au/policy/docs/assessment/policy.html

Grading Policy http://mq.edu.au/policy/docs/grading/policy.html

Grade Appeal Policy http://mq.edu.au/policy/docs/gradeappeal/policy.html

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the Learning and Teaching Category of Policy Central.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/support/student_conduct/

Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they

are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au.

Academic Honesty

The nature of scholarly endeavour, dependent as it is on the work of others, binds all members of the University community to abide by the principles of academic honesty. Its fundamental principle is that all staff and students act with integrity in the creation, development, application and use of ideas and information. This means that:

- all academic work claimed as original is the work of the author making the claim
- all academic collaborations are acknowledged
- academic work is not falsified in any way
- when the ideas of others are used, these ideas are acknowledged appropriately.

Further information on the academic honesty and schedule of penalties that will apply to breaches please consult the Academic Honesty Policy.

If you are unsure about how to incorporate scholarly sources into your own work, please speak to your Instructor or the Student Services team well in advance of your assessment. You may also enrol in StudyWise or visit the University's Library Webpage for more resources.

Final Examination Script Viewings and Grade Appeals

If, at the conclusion of the unit, you have performed below expectations, and are considering lodging an appeal of grade and/or viewing your final exam script please refer to http://www.city.mq.edu.au/new_and_current_students/appeals/ for information about associated cut off dates.

Please note that any requests to view exam papers must be booked in immediately following results release.

Before submitting a Grade Appeal, please ensure that you read the Grade Appeal Policy and noted valid grounds for appeals.

Attendance

Please refer to the Attendance Policy for Foundation Students.

A minimum level of 80% attendance is compulsory for all classes, including consultation sessions and any make-up classes scheduled on weekends. Attendance will be recorded in every lesson and note made of any lateness or period of absence from class.

Where a student is present for only for a minor portion of a lesson (for example arrives late, leaves early, leaves the class frequently or for lengthy periods, engages in inappropriate or unrelated activities or does not participate actively in the majority of the lesson) the instructor reserves the right to mark a student absent for that particular lesson and make note of such incidents.

Students should note that absenteeism (including partial absenteeism) not only has a negative

impact on not only their overall attendance record and their academic progress, but could also have ramifications for their visas or eligibility for social benefits where relevant.

In cases of unavoidable non-attendance due to illness or circumstances beyond control, students are advised to lodge a Disruption to Studies Notification via ask.mq.edu.au even if they have not missed a formal assessment task so that appropriate records of the reasons for unavoidable attendance can be made on their record.

Course Progression

Macquarie City Campus monitors Foundation students' course progress. Please refer to the Course Progress Policy.

To maintain satisfactory program performance students are required to pass 50% or more of their enrolled units in each session.

Students who fail to make satisfactory course progress will be classified as "at risk" students and may have conditions placed upon their enrolment.

International students must comply with the Course Progress policy in order to meet the conditions of their visa.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Support at Macquarie City Campus

Macquarie City Campus students who require assistance or support are encouraged to contact Student Services (studentadvisor@city.mq.edu.au) or make an appointment to see a student advisor at Reception on Level 2.

Macquarie University Campus Wellbeing services are also available at the City Campus. If you would like to make an appointment, please email info@city.mq.edu.au or visit their website at: http://www.campuslife.mq.edu.au/campuswellbeing.

Academic Support at Macquarie City Campus

Macquarie city campus provides free tutoring / support classes to its student. Support is available for Accounting, numeracy and essay and report writing, research presentation and referencing

skills.

Students who are experiencing difficulties in these areas are advised to attend these classes on a drop-in basis. So that the tutor can assist best, students must bring the work (e.g. assignment draft, essay draft, homework problem) with which that they are having difficulties.

For further information about tutoring services, please refer to the City Campus Portal Noticeboard under Timetables, Tutor Availability.

If you require additional support with university skills, you may also consider enrolling in UNIWISE. UNIWISE is an iLearn resource which provides:

- Online learning resources and academic skills workshops
- What is expected of you as a student at Macquarie University
- Personal assistance with your learning & study related questions
- Key strategies and tips that you can use to achieve successful learning both in and out of the classroom
- The definitions and examples of the types of assignments you will encounter in your units

Additional study spaces are also available on Level 1.

Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit http://informatics.mq.edu.au/help/.

When using the University's IT, you must adhere to the Acceptable Use Policy. The policy applies to all who connect to the MQ network including students.

IT Help at Macquarie City Campus

A lab demonstrator is situated in Lab 311 and can help you with any usage of university systems or resetting your password.

You may also refer to the Online Systems Password Document which has been made available on the City Campus Student Portal Noticeboard.

Whilst utilising the City Campus IT facilities, students are expected to act responsibly. The following regulations apply to the use of computing facilities and online services:

- Accessing inappropriate web sites or downloading inappropriate material is not

permitted.

- Material that is not related to coursework for approved unit is deemed inappropriate.
- Downloading copyright material without permission from the copyright owner is illegal, and strictly prohibited. Students detected undertaking such activities will face disciplinary action, which may result in criminal proceedings.

Non-compliance with these conditions may result in disciplinary action without further notice.

Equipment available for loan

Students may borrow headphones for use in the Macquarie City Campus computer labs (210, 307, 311, 608) or a video recorder.

Please ask at Level 2 Reception for details. You will be required to provide your MQC Student ID card which will be held as a deposit while using the equipment.

Graduate Capabilities

Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

Learning outcomes

- Recognise arithmetic and geometric progressions, and distinguish between a sequence and a series. Apply arithmetic and geometric progressions to solve problems involving progressions in finance, typically superannuation, reducible interest and annuities and other situations.
- Differentiate polynomial functions and apply the laws of differentiation. Differentiate exponential and logarithmic functions. Recognise and sketch exponential and logarithmic functions, and apply differentiation to curve sketching.
- Appreciate the concept of integration by first principles. Recognise when an integral is an area and when it is not. Apply standard rules to find areas under the curves, and interpret these areas. Integrate polynomial functions, exponential and logarithmic functions and apply these integral to physical problems.
- Solve problems involving application of calculus. Apply the concepts of differentiation to solve optimisation problems that are based on physical, financial or real world situations. Apply the concept of integration to solve and model physical phenomena.

- Use laws of Probability and tree diagrams to determine the likelihood of events. Calculate standard deviation and use the normal distribution and standard normal distribution in conjunction with Z scores to compare distributions & apply standard deviation concepts to problem solving.

Assessment tasks

- Test 1
- Group Project
- Test 2
- Participation
- Final Examination

Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

Learning outcomes

- Effectively use a scientific calculator and use the operations of basic algebra, percentages and equations of degree one, form equations and word equations.
- Recognise arithmetic and geometric progressions, and distinguish between a sequence and a series. Apply arithmetic and geometric progressions to solve problems involving progressions in finance, typically superannuation, reducible interest and annuities and other situations.
- Differentiate polynomial functions and apply the laws of differentiation. Differentiate exponential and logarithmic functions. Recognise and sketch exponential and logarithmic functions, and apply differentiation to curve sketching.
- Appreciate the concept of integration by first principles. Recognise when an integral is an area and when it is not. Apply standard rules to find areas under the curves, and interpret these areas. Integrate polynomial functions, exponential and logarithmic functions and apply these integral to physical problems.
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Calculate standard deviation and use the normal distribution and standard normal distribution in conjunction with Z scores to compare distributions & apply standard deviation concepts to problem solving.

Assessment tasks

- Test 1
- Group Project
- Test 2
- Participation
- Final Examination

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcomes

- Effectively use a scientific calculator and use the operations of basic algebra, percentages and equations of degree one, form equations and word equations.
- Recognise arithmetic and geometric progressions, and distinguish between a sequence and a series. Apply arithmetic and geometric progressions to solve problems involving progressions in finance, typically superannuation, reducible interest and annuities and other situations.
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- Use laws of Probability and tree diagrams to determine the likelihood of events. Calculate standard deviation and use the normal distribution and standard normal distribution in conjunction with Z scores to compare distributions & apply standard deviation concepts to problem solving.

Assessment tasks

- Test 1
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- Final Examination

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

- Recognise arithmetic and geometric progressions, and distinguish between a sequence and a series. Apply arithmetic and geometric progressions to solve problems involving progressions in finance, typically superannuation, reducible interest and annuities and other situations.
- Differentiate polynomial functions and apply the laws of differentiation. Differentiate exponential and logarithmic functions. Recognise and sketch exponential and logarithmic functions, and apply differentiation to curve sketching.
- Appreciate the concept of integration by first principles. Recognise when an integral is an area and when it is not. Apply standard rules to find areas under the curves, and interpret these areas. Integrate polynomial functions, exponential and logarithmic functions and apply these integral to physical problems.
- Solve problems involving application of calculus. Apply the concepts of differentiation to solve optimisation problems that are based on physical, financial or real world situations. Apply the concept of integration to solve and model physical phenomena.
- Use laws of Probability and tree diagrams to determine the likelihood of events. Calculate standard deviation and use the normal distribution and standard normal distribution in conjunction with Z scores to compare distributions & apply standard

deviation concepts to problem solving.

Assessment tasks

- Test 1
- Group Project
- Test 2
- Participation
- Final Examination

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

- Effectively use a scientific calculator and use the operations of basic algebra, percentages and equations of degree one, form equations and word equations.
- Recognise arithmetic and geometric progressions, and distinguish between a sequence and a series. Apply arithmetic and geometric progressions to solve problems involving progressions in finance, typically superannuation, reducible interest and annuities and other situations.
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Assessment tasks

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Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

Learning outcomes

- Effectively use a scientific calculator and use the operations of basic algebra, percentages and equations of degree one, form equations and word equations.
- Recognise arithmetic and geometric progressions, and distinguish between a sequence and a series. Apply arithmetic and geometric progressions to solve problems involving progressions in finance, typically superannuation, reducible interest and annuities and other situations.

Assessment tasks

- Test 1
- Test 2
- Participation
- Final Examination

Progression into Undergraduate studies

Completing the Foundation Program

When you successfully complete your Macquarie Foundation Program to the required level, you can articulate into a bachelor's degree at Macquarie University, either the North Ryde campus or the City Campus. Students who successfully complete the Macquarie University Foundation Program but are not eligible for direct admission into an undergraduate degree can still apply to study an SIBT diploma either at Macquarie University or city campus.

How is entry into Macquarie Undergraduate degrees

assessed?

In the Macquarie Foundation Program, students' performance is measured against the MQA (Macquarie University Average). This MQA score is used to determine whether a student is eligible for entry into their chosen bachelor degree at Macquarie University. The MQA is calculated as the average of each student's performance in their level 2 elective units only.

For further information about the MQA and progression into your Undergraduate degree, please see the Entry pathways to Macquarie University webpage.

Exiting Foundation Student Information Session

An information session will be held in Week 10 for students in their final session of the Foundation Program. You will receive an invitation to attend this session in Week 9 of your final semester, via your student email. At the session you will be provided with information on how to apply for your preferred degree and will be given an opportunity to ask questions, so it is strongly recommended that you attend the Information Session for Finishing Foundation Students.