MATH1916

A View of Mathematics

Session 2, Special circumstance, Other 2020

Department of Mathematics and Statistics

Contents

Notice

As part of Phase 3 of our return to campus plan, most units will now run tutorials, seminars and ot her small group learning activities on campus for the second half-year, while keeping an online ver sion available for those students unable to return or those who choose to continue their studies onli ne.

To check the availability of face-to-face and onlin e activities for your unit, please go to timetable vi ewer. To check detailed information on unit asses sments visit your unit's iLearn space or consult yo ur unit convenor.

General Information

Unit convenor and teaching staff
Unit Convenor
Christopher Gordon
chris.gordon@mq.edu.au
See iLearn

Credit points
10

Prerequisites

Corequisites

Co-badged status

Unit description
This unit is principally designed for students intending to teach in primary schools. It emphasises the use of imagination and logical thinking in developing mathematical approaches to solve a wide variety of interesting problems. In addition, the material is selected in a way that encourages students to appreciate the importance of mathematics as part of our cultural heritage. The material in this unit is accessible to students who have studied little mathematics at secondary level.

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:

ULO1: understand the breadth of the discipline, its role in other fields, its value in education in general and its importance as part of our cultural heritage.
ULO2: develop an appreciation for the underlying mathematics found in everyday scenes and occurrences.
ULO3: apply mathematical principles and mathematical thinking in developing mathematical approaches to solve practical and abstract problems
ULO4: formulate and model practical and abstract problems in mathematical terms using the methods taught in MATH1916

ULO5: construct logical, clearly presented and justified mathematical arguments incorporating deductive reasoning at the level appropriate for MATH1916

ULO6: interpret information communicated in mathematical form

ULO7: present information, reasoning and conclusions in both written and spoken form to their peers and their teachers.

ULO8: work effectively, responsibly and safely in an individual or team context.

General Assessment Information

HURDLES: Participation and reasonable engagement in the class activities in at least 8 of the SGTA classes are requirements to pass the unit. This is a hurdle requirement.

ASSIGNMENT SUBMISSION: Assignment submission will be online through the iLearn page.

Submit assignments online via the appropriate assignment link on the iLearn page. A personalised cover sheet is not required with online submissions. Read the submission statement carefully before accepting it as there are substantial penalties for making a false declaration.

- Assignment submission is via iLearn. You should upload this as a single scanned PDF file.
- Please note the quick guide on how to upload your assignments provided on the iLearn page.
- Please make sure that each page in your uploaded assignment corresponds to only one A4 page (do not upload an A3 page worth of content as an A4 page in landscape). If you are using an app like Clear Scanner, please make sure that the photos you are using are clear and shadow-free.
- It is your responsibility to make sure your assignment submission is legible.
- If there are technical obstructions to your submitting online, please email us to let us know.

You may submit as often as required prior to the due date/time. Please note that each submission will completely replace any previous submissions. It is in your interests to make frequent submissions of your partially completed work as insurance against technical or other problems near the submission deadline.

LATE SUBMISSION OF WORK: All assignments or assessments must be submitted by the official due date and time. No marks will be given to late work unless an extension has been granted following a successful application for Special Consideration. Please contact the unit convenor for advice as soon as you become aware that you may have difficulty meeting any of the assignment deadlines. It is in your interests to make frequent submissions of your partially completed work. Note that later submissions completely replace any earlier submission, and so only the final submission made before the due date will be marked.

Assessment Tasks

Name	Weighting	Hurdle	Due
SGTA weekly quizzes	20%	Yes	Weekly
Assignment 1	20%	No	Week 6
Assignment 2	20%	No	Week 10
Mastery Test (online)	20%	No	Week 13
Assignment 3	20%	No	Week 14

SGTA weekly quizzes

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 10 hours
Due: **Weekly**
Weighting: **20%**
This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

A weekly quiz covering the material from SGTA content

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- present information, reasoning and conclusions in both written and spoken form to their peers and their teachers.
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Assignment 1

Assessment Type [1]: Problem set
Indicative Time on Task [2]: 6 hours
Due: **Week 6**

Weighting: **20%**

Problems are chosen to explore concepts and techniques learned in the unit. Students will solve the problems using logical mathematical arguments and submit clearly written solutions.

On successful completion you will be able to:

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Assignment 2

Assessment Type [1]: Problem set
Indicative Time on Task [2]: 6 hours
Due: **Week 10**
Weighting: **20%**

Problems are chosen to explore concepts and techniques learned in the unit. Students will solve the problems using logical mathematical arguments and submit clearly written solutions.

On successful completion you will be able to:

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- develop an appreciation for the underlying mathematics found in everyday scenes and

occurrences.
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Mastery Test (online)

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 6 hours
Due: **Week 13**
Weighting: **20%**

Students participate in an online quiz to demonstrate mastery of basic numeracy skills necessary for teaching.

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Assignment 3

Assessment Type [1]: Problem set
Indicative Time on Task [2]: 6 hours
Due: **Week 14**
Weighting: **20%**

Problems are chosen to explore concepts and techniques learned in the unit. Students will solve the problems using logical mathematical arguments and submit clearly written solutions.

On successful completion you will be able to:

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[1] If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Writing Centre for academic skills support.

[2] Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Classes

Lectures: there is one one-hour lecture each week.

SGTAs: There are three days scheduled for groups of SGTA classes.

Please see the iLearn page for further details regarding these days.

Required and Recommended Texts and/or Materials

The required text for this unit is the smart book option of Mathematics for Elementary Teachers: A Conceptual Approach Bennett, Burton, Nelson and Ediger, 10th edition.

The text is also available as an ebook or as a hardback, but we will be utilizing the smart book resources. Past students have found this textbook very useful and have also said they believe they will continue to use it as they begin their teaching careers.

In addition the following are some good modern websites with material for “Mathematical Outreach”. Some of the material is suitable for primary level, other secondary; but all is good for general interest in mathematics and its varied uses:

- Math Amaze.
- Maths in and out of the zoo, a talk for all ages. (Powerpoint slides)
- NRICH, online magazine.
- +plus, online magazine.
- Motivate, enrichment resources.

Other material of interest:

- Maths Practice
- PrimaryGames

Numeracy Centre

The Numeracy Centre (Room E7B G.188) offers free drop in help to students enrolled in first year courses with a math component. This help is available for students who are studying MATH1916. See the Centre's website for further information. Students are advised to enrol in the Numeracy Centre's iLearn page for additional resources.

Technology Used and Required

Students are expected to have access to an internet enabled computer with a web browser and Adobe Reader software. Several areas of the university provide wireless access for portable computers.

Unit Schedule

Week	Topic (NSW Syllabus Content Strand)	SGTA Sessions for External Offering Only (see iLearn page for further details)	Task Due
1	Problem Solving (Working Mathematically)		Quiz 1
2	Number Systems (Number and Algebra)		Quiz 2
3	Working with Numbers (Number and Algebra)		Quiz 3
4	Properties of Whole Numbers (Number and Algebra)	Saturday, 10am - 4pm, end of week 4, Covering tutorials 1 - 5	Quiz 4
5	Properties of Whole Numbers (Number and Algebra)		Quiz 5
6	Working with numbers between the whole numbers (Number and Algebra)		Quiz 6 Assignment 1
7	Creating and Interpreting Graphs (Statistics and Probability)		Quiz 7
Mid Semester			
8	Probability and Counting (Statistics and Probability)	Saturday, 10am - 4pm, end of week 8 Covering tutorials 6 - 9	Quiz 8
9	Probability and Counting (Statistics and Probability)		Quiz 9
10	Geometric Figures (Measurement and Geometry)		Quiz 10 Assignment 2

Week	Topic (NSW Syllabus Content Strand)	SGTA Sessions for External Offering Only (see iLearn page for further details)	Task Due
11	Geometric Figures (Measurement and Geometry)		Quiz 11
12	Geometric Figures (Measurement and Geometry)	Saturday, 10am - 4pm, end of week 12 Covering tutorials 10 - 13	Quiz 12
13	Measurement (Measurement and Geometry)		Quiz 13 Assignment 3 due Week 14

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public
- Special Consideration Policy *(**Note:** The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)*

Students seeking more policy resources can visit the Student Policy Gateway (https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/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/study/getting-started/student-conduct

Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) 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 or if you are a Global MBA student contact globalmba.support@mq.edu.au

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 help you improve your marks and take control of your study.

- Getting help with your assignment
- Workshops
- StudyWise
- Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

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

If you are a Global MBA student contact globalmba.support@mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy.

The policy applies to all who connect to the MQ network including students.