MATH7904
Research Topics in Mathematics 1
Session 1, In person-scheduled-weekday, North Ryde 2022
School of Mathematical and Physical Sciences

Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
<td>2</td>
</tr>
<tr>
<td>Learning Outcomes</td>
<td>2</td>
</tr>
<tr>
<td>General Assessment Information</td>
<td>2</td>
</tr>
<tr>
<td>Assessment Tasks</td>
<td>3</td>
</tr>
<tr>
<td>Delivery and Resources</td>
<td>5</td>
</tr>
<tr>
<td>Policies and Procedures</td>
<td>6</td>
</tr>
</tbody>
</table>

Disclaimer
Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.
General Information

Unit convenor and teaching staff
Paul Bryan
paul.bryan@mq.edu.au

Credit points
10

Prerequisites
Admission to MRes

Corequisites

Co-badged status

Unit description
This unit is based on an area of current mathematical research. The specific area may vary from year to year depending on the interests of the students and lecturer.

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: Demonstrate advanced disciplinary knowledge and skills in a particular area of mathematics.
ULO2: Apply advanced mathematical skills to related areas of mathematics or other disciplines.
ULO3: Use abstract mathematical frameworks to synthesize diverse examples or phenomena from within a particular area of mathematics.
ULO4: Communicate effectively the results of advanced mathematical reasoning.

General Assessment Information

HURDLES: This unit has no hurdle requirements.

ASSIGNMENT SUBMISSION: Assignment submission will be online through the iLearn page.
Submit assignments online via the appropriate assignment link on the iLearn page.
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.
- 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:** All assignments must be submitted by the official due date and time. No marks will be given for late work unless an extension has been granted following a successful application for **Special Consideration**. Please contact one of the unit convenors 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.

**FINAL EXAM POLICY:** This unit has no final exam.

### Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 4</td>
<td>25%</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Assignment 1</td>
<td>25%</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Assignment 3</td>
<td>25%</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Assignment 2</td>
<td>25%</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

**Assignment 4**

Assessment Type: Problem set  
Indicative Time on Task: 10 hours
Due:  
Weighting: 25%  
The assignments reinforce and build on material from lectures, as well as leading students towards more advanced topics. They are designed to promote a more independent style of learning than in standard undergraduate units.

On successful completion you will be able to:  
- Demonstrate advanced disciplinary knowledge and skills in a particular area of mathematics.  
- Apply advanced mathematical skills to related areas of mathematics or other disciplines.  
- Use abstract mathematical frameworks to synthesize diverse examples or phenomena from within a particular area of mathematics.  
- Communicate effectively the results of advanced mathematical reasoning.

Assignment 1  
Assessment Type: Problem set  
Indicative Time on Task: 10 hours  
Due:  
Weighting: 25%  
The assignments reinforce and build on material from lectures, as well as leading students towards more advanced topics. They are designed to promote a more independent style of learning than in standard undergraduate units.

On successful completion you will be able to:  
- Demonstrate advanced disciplinary knowledge and skills in a particular area of mathematics.  
- Apply advanced mathematical skills to related areas of mathematics or other disciplines.  
- Use abstract mathematical frameworks to synthesize diverse examples or phenomena from within a particular area of mathematics.  
- Communicate effectively the results of advanced mathematical reasoning.

Assignment 3  
Assessment Type: Problem set  
Indicative Time on Task: 10 hours  
Due:  
Weighting: 25%  
The assignments reinforce and build on material from lectures, as well as leading students towards more advanced topics. They are designed to promote a more independent style of learning than in standard undergraduate units.
On successful completion you will be able to:

- Demonstrate advanced disciplinary knowledge and skills in a particular area of mathematics.
- Apply advanced mathematical skills to related areas of mathematics or other disciplines.
- Use abstract mathematical frameworks to synthesize diverse examples or phenomena from within a particular area of mathematics.
- Communicate effectively the results of advanced mathematical reasoning.

Assignment 2

Assessment Type 1: Problem set
Indicative Time on Task 2: 10 hours
Due: 
Weighting: 25%

The assignments reinforce and build on material from lectures, as well as leading students towards more advanced topics. They are designed to promote a more independent style of learning than in standard undergraduate units.

On successful completion you will be able to:

- Demonstrate advanced disciplinary knowledge and skills in a particular area of mathematics.
- Apply advanced mathematical skills to related areas of mathematics or other disciplines.
- Use abstract mathematical frameworks to synthesize diverse examples or phenomena from within a particular area of mathematics.
- Communicate effectively the results of advanced mathematical reasoning.

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

1 2hr meeting per week.
Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). 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
- Assessment Procedure
- Complaints Resolution Procedure for Students and Members of the Public
- Special Consideration Policy

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

To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.edu.au) and use the search tool.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/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

Academic Integrity

At Macquarie, we believe academic integrity – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free online writing and maths support, academic skills development and wellbeing consultations.

Student Support

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

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Workshops
- Chat with a WriteWISE peer writing leader
- Access StudyWISE
- Upload an assignment to Studiosity
- Complete the 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

Macquarie University offers a range of Student Support Services including:

- IT Support
- Accessibility and disability support with study
- Mental health support
- Safety support to respond to bullying, harassment, sexual harassment and sexual assault
- Social support including information about finances, tenancy and legal issues

Student Enquiries

Got a question? Ask us via AskMQ, or contact Service Connect.

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.