MATH801

Mathematics Research Skills

S3 Day 2019

Dept of Mathematics and Statistics

Contents

General Information

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Credit points 4
Prerequisites 12cp in MATH units at 300 level
Corequisites
Co-badged status
Unit description Topics covered in this unit include an introduction to a mathematical typesetting language, a software package and use of web; or an appropriate MRes 4 credit point unit.

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:

On successful completion of this unit, you will be able to typeset in LaTeX or RMarkdown

On successful completion of this unit, you will be able to write reproducible reports using RStudio

On successful completion of this unit, you will be able to create simple R packages

Assessment Tasks

Name	Weighting	Hurdle	Due
Progress report	10%	No	Day 6
R package	45%	No	Day 9
Project report	45%	No	Day 12

Progress report

Due: **Day 6**
Weighting: **10%**

You will need to submit a progress report on the software development, for discussion with the unit deliverer.

On successful completion you will be able to:

- On successful completion of this unit, you will be able to typeset in LaTeX or RMarkdown
- On successful completion of this unit, you will be able to write reproducible reports using RStudio

R package

Due: **Day 9**
Weighting: **45%**

You will be required to write a simple R package, potentially in support to the report.

On successful completion you will be able to:

- On successful completion of this unit, you will be able to create simple R packages

Project report

Due: **Day 12**
Weighting: **45%**

You will produce a reproducible report or a vignette in RStudio and will submit the report and its source code.

On successful completion you will be able to:

- On successful completion of this unit, you will be able to typeset in LaTeX or RMarkdown
- On successful completion of this unit, you will be able to write reproducible reports using RStudio

Delivery and Resources

Classes

There are no classes, but students are required to meet with staff regularly. The schedule will be arranged at the beginning of the unit.

Technology Used and Required

iLearn (which is a version of Moodle) is used for delivery of MATH801 course material and can

be accessed at: http://ilearn.mq.edu.au.

Additionally, the free softwares R and RStudio will be used during the unit.

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.)*

Undergraduate 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 improve your marks and take control of your study.

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

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.

Graduate Capabilities

PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcome

- On successful completion of this unit, you will be able to write reproducible reports using RStudio

Assessment task

- Project report

PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of

knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

Learning outcomes

- On successful completion of this unit, you will be able to write reproducible reports using RStudio
- On successful completion of this unit, you will be able to create simple R packages

Assessment tasks

- R package
- Project report

PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

Assessment task

- Project report

PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

Learning outcomes

- On successful completion of this unit, you will be able to write reproducible reports using RStudio
- On successful completion of this unit, you will be able to create simple R packages

Assessment tasks

- R package
- Project report

PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

Learning outcomes

- On successful completion of this unit, you will be able to typeset in LaTeX or RMarkdown
- On successful completion of this unit, you will be able to write reproducible reports using RStudio

Assessment tasks

- Progress report
- Project report

PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning outcomes

- On successful completion of this unit, you will be able to typeset in LaTeX or RMarkdown
- On successful completion of this unit, you will be able to write reproducible reports using RStudio

Assessment tasks

- Progress report
- Project report

Changes since First Published

Date	Description
25/11/2019	A few changes in the assessment plan.