MATH3599

PACE: Professional Practice for Mathematical Sciences

Session 2, In person-scheduled-weekday, North Ryde 2024

School of Mathematical and Physical Sciences

Contents

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General Information

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Credit points
10

Prerequisites
(Admission to BMathSci or BSc or BCom) and (20cp from STAT or MATH units at 3000 level)

Corequisites

Co-badged status

Unit description

This PACE unit draws together learning in previous units to prepare students for the workplace through engaging with a partner organisation. Students will work in close collaboration throughout the session with a project sponsor that has provided a problem to be solved or a study to be designed. Students will develop the ability to appreciate the nature of statistical/mathematical problems and discuss the problem solving cycle; listen to a client's statement of a problem and ask appropriate questions for clarification; recognise appropriate statistical/mathematical techniques for use in a variety of problems, and apply these techniques competently; recognise situations in which familiar techniques do not apply and search the literature for appropriate alternative techniques; write reports at an appropriate technical level for a client or a colleague; give a verbal summary of a statistical/mathematical investigation at a level appropriate for the audience; and discuss the ethical aspects and implications of professional statistical/mathematical work.

Visit Employability Connect for important information on this unit including required preparation and closing dates for PACE activities.

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: Critically analyse and describe the client's problem and apply principles, models, tool, techniques, technology and processes to provide a solution.

ULO2: Effectively communicate stages and results of the project (in both written and oral form)

ULO3: Recognise and address ethical issues when they arise based on an understanding of professional ethic

ULO4: Improve ability to work co-operatively as a team member

General Assessment Information

Requirements to Pass this Unit To pass this unit you must:

• Achieve a total mark equal to or greater than 50%.

Hurdle Assessments

There are no hurdle assessments for this unit. Attendance and participation in the workshops is expected for this unit, and is part of the assessment.

Late Assessment Submission Penalty

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark of the task) will be applied for each day a written report or presentation assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. The submission time for all uploaded assessments is 11:55 pm. A 1-hour grace period will be provided to students who experience a technical concern.

For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, please apply for Special Consideration.

Special Considerations

The Special Consideration Policy aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through ask.mq.edu.au.

Written Assessments/Quizzes/Tests: If you experience circumstances or events that affect your ability to complete the written assessments in this unit on time, please inform the convenor and submit a Special Consideration request through ask.mq.edu.au.

Assessment Tasks

Name	Weighting	Hurdle	Due
Activity-Based Learning	10%	No	Weekly
Work Readiness Self-Reflection	10%	No	Weeks 2 & 13
Project Plan	10%	No	Week 4
Project Report	50%	No	Week 12
Project Presentation	20%	No	Weeks 12 & 13

Activity-Based Learning

Assessment Type [1]: Work-integrated task
Indicative Time on Task [2]: 6 hours
Due: **Weekly**
Weighting: **10%**

Contribution to weekly activities such as workshops, client meetings, group meetings and discussions.

On successful completion you will be able to:

- Critically analyse and describe the client's problem and apply principles, models, tool, techniques, technology and processes to provide a solution.
- Effectively communicate stages and results of the project (in both written and oral form)
- Recognise and address ethical issues when they arise based on an understanding of professional ethic
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Work Readiness Self-Reflection

Assessment Type [1]: Reflective Writing
Indicative Time on Task [2]: 5 hours
Due: **Weeks 2 & 13**
Weighting: **10%**

Self Reflection on previous learning, group process, technical aspects of the group project and working with partner experience.

On successful completion you will be able to:

- Effectively communicate stages and results of the project (in both written and oral form)
- Recognise and address ethical issues when they arise based on an understanding of professional ethic

Project Plan

Assessment Type [1]: Plan
Indicative Time on Task [2]: 5 hours
Due: **Week 4**
Weighting: **10%**

The project plan is a document where students outline what they are going to do to address the issues raised by the partner (i.e. designing a study or solving a problem) in a given time frame (i.e. project milestones achieved within the session).

On successful completion you will be able to:

- Critically analyse and describe the client's problem and apply principles, models, tool, techniques, technology and processes to provide a solution.

- Effectively communicate stages and results of the project (in both written and oral form)
- Recognise and address ethical issues when they arise based on an understanding of professional ethic
- Improve ability to work co-operatively as a team member

Project Report

Assessment Type [1]: Report
Indicative Time on Task [2]: 15 hours
Due: **Week 12**
Weighting: **50%**

Written report to demonstrate a solution to a client problem.

On successful completion you will be able to:

- Critically analyse and describe the client's problem and apply principles, models, tool, techniques, technology and processes to provide a solution.
- Effectively communicate stages and results of the project (in both written and oral form)
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Project Presentation

Assessment Type [1]: Presentation
Indicative Time on Task [2]: 5 hours
Due: **Weeks 12 & 13**
Weighting: **20%**

All members of a group will present a talk on a particular aspect of the project.

On successful completion you will be able to:

- Critically analyse and describe the client's problem and apply principles, models, tool, techniques, technology and processes to provide a solution.
- Effectively communicate stages and results of the project (in both written and oral form)
- Recognise and address ethical issues when they arise based on an understanding of professional ethic

- Improve ability to work co-operatively as a team member

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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

Workshops (beginning in Week 1): There is one two-hour class each week.

Methods of Communication

We will communicate with you via your university email or through announcements on iLearn. Queries to convenors can either be placed on the iLearn discussion board or sent to your lecturers from your university email address.

Unit Schedule

WEEK	TOPIC	Staff
1	Introduction to consulting in statistical and mathematical sciences	MM & FV
2	Asking the right questions (oral communication skills) & Literature Review	MM & FV
3	Data preparation for analysis	MM & FV
4	Working in a group (skills required for effective group work)	MM & FV
5	Statistical Graphics	MM & FV
6	Writing a report (written communication skills)	MM & FV
7	Statistical and mathematical thinking	MM & FV
8	Human side of consulting (Guest lecture)	MM & FV
	Mid semester break (not holiday)	
9	Ethics in statistics & mathematics	MM & FV
10	Public Holiday	
11	Project Work	MM & FV
12	Presentations of final projects	MM & FV
13	Presentations of final projects	MM & FV

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 Advocacy provides independent advice on MQ policies, procedures, and processes

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.

Changes from Previous Offering

We value student feedback to be able to continually improve the way we offer our units. As such we encourage students to provide constructive feedback via stu- dent surveys, to the teaching staff directly, or via the FSE Student Experience & Feedback link in the iLearn page.

Student feedback from the previous offering of this unit was very positive overall, with students pleased with the clarity around assessment requirements and the level of support from teaching staff. As such, no change to the delivery of the unit is planned, however we will continue to strive to improve the level of support and the level of student engagement.

Unit information based on version 2024.04 of the Handbook