



# STAT3599

## PACE: Professional Practice for Statistical Data Sciences

Session 2, In person-scheduled-weekday, North Ryde 2026

*School of Mathematical and Physical Sciences*

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#### Disclaimer

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## General Information

Unit convenor and teaching staff

Convenor

Frank Valckenborgh

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Contact via email

12WW613

Any time when not teaching or in meeting.

Convenor

Maurizio Manuguerra

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By appointment

Credit points

10

Prerequisites

20cp from STAT units at 3000 level

Corequisites

Co-badged status

Unit description

This PACE unit integrates learning from previous units to prepare students for the workplace through collaboration with a partner organisation. Students work closely with a project sponsor to solve a problem or design a study. They develop skills in understanding mathematical/statistical problems, discussing the problem-solving cycle, clarifying client needs, selecting appropriate techniques, and applying them competently. Students also learn to recognise when familiar methods don't apply and to seek alternative solutions, write reports for clients or colleagues, present findings verbally, and discuss the ethical aspects of professional work.

Visit [Employability Connect](#) for important information on this unit including required preparation and closing dates for PACE activities.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Good Health and Well Being; Quality Education; Industry, Innovation and Infrastructure;

## 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, tools, 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.

### Release

- Project Plan – Specifications to be released no later than Friday 7th August.
- Project Report – Specifications to be released no later than Friday 9th October.
- Project Presentation – Specifications to be released no later than Friday 18th September.

### Late Assessment Submission Penalty

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, assignments, performance assessments/presentations, and/or scheduled practical assessments/labs, please apply for Special Consideration: <https://connect.mq.edu.au>.

Late assessments are not accepted in this unit unless a [Special Consideration](#) has been submitted and approved.

## 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 <https://connect.mq.edu.au>.

## Short Extensions

Automatically approved short extensions are not allowed in this unit.

## Assessment Tasks

| Name                                 | Weighting | Hurdle | Due        | Groupwork/Individual | Short Extension | AI Approach |
|--------------------------------------|-----------|--------|------------|----------------------|-----------------|-------------|
| <a href="#">Project Plan</a>         | 15%       | No     | 23/08/2026 | Individual and Group | No              | Open        |
| <a href="#">Project Presentation</a> | 35%       | No     | 19/10/2026 | Individual           | No              | Observed    |
| <a href="#">Project Report</a>       | 50%       | No     | 01/11/2026 | Individual and Group | No              | Open        |

## Project Plan

Assessment Type <sup>1</sup>: Professional task

Indicative Time on Task <sup>2</sup>: 5 hours

Due: **23/08/2026**

Weighting: **15%**

Groupwork/Individual: Individual and Group

Short extension <sup>3</sup>: No

AI Approach: Open

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, tools, 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 Presentation

Assessment Type <sup>1</sup>: Presentation task

Indicative Time on Task <sup>2</sup>: 13 hours

Due: **19/10/2026**

Weighting: **35%**

Groupwork/Individual: Individual

Short extension <sup>3</sup>: No

AI Approach: Observed

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, tools, 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 <sup>1</sup>: Written Submission

Indicative Time on Task <sup>2</sup>: 18 hours

Due: **01/11/2026**

Weighting: **50%**

Groupwork/Individual: Individual and Group

Short extension <sup>3</sup>: No

AI Approach: Open

Written report to demonstrate a solution to a client problem and self reflect on previous learning, group process, technical aspects of the group project and working with partner experience.

On successful completion you will be able to:

- Critically analyse and describe the client's problem and apply principles, models, tools, 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

<sup>1</sup> 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
- [Academic Success](#) for academic skills support.

<sup>2</sup> Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation.

<sup>3</sup> An automatic short extension is available for some assessments. Apply through the [Service Connect Portal](#).

## Delivery and Resources

### Classes

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

The timetable for classes can be found on the University website at: <https://publish.mq.edu.au/>.  
Enrolment can be managed using eStudent at: <https://students.mq.edu.au/support/technology/systems/estudent>.

### 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                                                                                                                                                                                 |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Introduction to consulting in statistical and mathematical sciences, talking to clients and asking the right questions, working in a group (skills required for effective group work) |
| 2    | Choosing the right group and project; project planning                                                                                                                                |
| 3    | Literature Review (Guest lecture from MQ Library)                                                                                                                                     |
| 4    | Data preparation for analysis, Statistical Graphics, Writing a report (written communication skills) + Project Work                                                                   |
| 5    | Project Work                                                                                                                                                                          |
| 6    | Statistical and mathematical thinking, ethics in statistics & mathematics + Project Work                                                                                              |
| 7    | Human side of consulting (Guest lecture) + Project Work                                                                                                                               |
| 8    | Project Work                                                                                                                                                                          |
|      | Mid semester break (not holiday)                                                                                                                                                      |
| 9    | Project Work                                                                                                                                                                          |

|    |                                 |
|----|---------------------------------|
| 10 | Project Work                    |
| 11 | Presentations of final projects |
| 12 | Presentations of final projects |
| 13 | Presentations of final projects |

This unit schedule is only tentative and can change due to guest lecturer availability or other reasons.

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](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 \(https://students.mq.edu.au/support/study/policies\)](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 \(https://policies.mq.edu.au\)](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 [connect.mq.edu.au](https://connect.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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/>

### Academic Success

[Academic Success](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Ask a Study Coach](#)
- [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 the [Service Connect Portal](#), or contact [Service Connect](#).

## IT Help

For help with University computer systems and technology, visit <https://students.mq.edu.au/support/technology/service-desk>.



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 student 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.

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Unit information based on version 2026.02 of the [Handbook](#)