



# ECON2032

## Econometric Principles

Session 2, In person-scheduled-weekday, North Ryde 2023

*Department of Economics*

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## General Information

Unit convenor and teaching staff

Colin Bowers

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Credit points

10

Prerequisites

ECON241 or ECON2041 or STAT272 or STAT2372

Corequisites

Co-badged status

Unit description

This unit provides an introduction to modern econometric techniques. Its principal objectives are to extend knowledge beyond the classical regression model and to develop literacy in methods that are commonly used to analyse data in economics, finance and business. The topics covered may include: heteroscedasticity, stochastic regressors, limited dependent variables, time-series regression and panel data analysis. This unit will be of value to any students who are interested in how useful information may be inferred from economic data in a statistically valid way.

## 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:** Identify and describe econometric concepts and theories.

**ULO2:** Estimate econometric models and test parametric hypotheses using techniques that are appropriate for the problem at hand.

**ULO3:** Diagnose and resolve problems relating to the violation of standard assumptions in econometric models, and make conclusions and recommendations regarding your solutions.

**ULO4:** Critique the appropriateness of alternative econometric techniques in practical applications to appropriate problems.

## General Assessment Information

### Late Assessment Submission Penalty (written assessments)

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark) will be applied each day a written 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. Submission time for all written assessments is set at 11.55 pm. A 1-hour grace period is provided to students who experience a technical concern.

For any late submissions of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, students need to submit an application for [Special Consideration](#).

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Tutorial exercises</a>	15%	No	Weeks 3, 5, 7, 9, and 11
<a href="#">Mid-session Test</a>	15%	No	Week 8
<a href="#">Assignment</a>	20%	No	Week 13
<a href="#">Final exam</a>	50%	No	Examination period

### Tutorial exercises

Assessment Type <sup>1</sup>: Problem set

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

Due: **Weeks 3, 5, 7, 9, and 11**

Weighting: **15%**

Tutorial exercise quiz in W3 is weighted 5% and designed to ensure that you quickly review key concepts in maths and statistics taught in prerequisite units which will be necessary for you to progress through the new material in this unit; the remaining Tutorial exercise quizzes in W5, 7, 9, 11 are worth 2.5% each. Each quiz will be a problem set to be completed at the end of the week in a designated time window. The tutorial classes will help you prepare for the quizzes.

On successful completion you will be able to:

- Identify and describe econometric concepts and theories.
- Estimate econometric models and test parametric hypotheses using techniques that are appropriate for the problem at hand.

- Diagnose and resolve problems relating to the violation of standard assumptions in econometric models, and make conclusions and recommendations regarding your solutions.
- Critique the appropriateness of alternative econometric techniques in practical applications to appropriate problems.

## Mid-session Test

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 3 hours

Due: **Week 8**

Weighting: **15%**

The test assesses the work covered in lectures up to the submission deadline, and consists of a set of questions to be answered on iLearn. It may consist of true-false, multiple choice, numerical and simple answer questions.

On successful completion you will be able to:

- Identify and describe econometric concepts and theories.
- Estimate econometric models and test parametric hypotheses using techniques that are appropriate for the problem at hand.
- Diagnose and resolve problems relating to the violation of standard assumptions in econometric models, and make conclusions and recommendations regarding your solutions.
- Critique the appropriateness of alternative econometric techniques in practical applications to appropriate problems.

## Assignment

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

Indicative Time on Task <sup>2</sup>: 19 hours

Due: **Week 13**

Weighting: **20%**

Students will be given an applied econometric problem to work on and will be required to submit a written report on their investigation of the problem. Students may also be required to submit relevant computer files.

On successful completion you will be able to:

- Identify and describe econometric concepts and theories.
- Estimate econometric models and test parametric hypotheses using techniques that are appropriate for the problem at hand.
- Diagnose and resolve problems relating to the violation of standard assumptions in econometric models, and make conclusions and recommendations regarding your solutions.
- Critique the appropriateness of alternative econometric techniques in practical applications to appropriate problems.

## Final exam

Assessment Type <sup>1</sup>: Examination

Indicative Time on Task <sup>2</sup>: 50 hours

Due: **Examination period**

Weighting: **50%**

A two-hour examination, consisting of multiple choice, numerical, and short answer questions, will be held during the University Examination Period.

On successful completion you will be able to:

- Identify and describe econometric concepts and theories.
- Estimate econometric models and test parametric hypotheses using techniques that are appropriate for the problem at hand.
- Diagnose and resolve problems relating to the violation of standard assumptions in econometric models, and make conclusions and recommendations regarding your solutions.
- Critique the appropriateness of alternative econometric techniques in practical applications to appropriate problems.

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<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
- the [Writing Centre](#) 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

## Delivery and Resources

### Unit Webpage

Useful information and the course material will be made available on the learning management system ([iLearn](#)). Visit the homepage regularly for new information, course material and announcements.

### Technologies used

1. Students *may* find a non-programmable calculator useful for tutorials, tests and the final examination.
2. Students will require access to a computer and an internet connection, as well as the ability to stream pre-recorded lectures and participate in live lectures via Zoom. Note, [wifi is available](#) on campus for all current students. A web-browser will also be needed for accessing [iLearn](#).
3. The main software package used is [Gretl](#). It is free and open-source, and available on Windows, Mac, or Linux.
4. The use of a spreadsheet may be helpful for some tasks in this unit. All current students at Macquarie University have access to Microsoft Excel via Office 365. Log in at the [Office portal](#) using your student email address and OneID password. Alternatively, other free spreadsheet software options include [OpenOffice](#) or [LibreOffice](#).

### Recommended Texts

Woodridge, Jeffrey M., *Introductory Econometrics: A Modern Approach*, 7th edition

The text is available online via [MQ Library](#). Each week will include a recommended reading from the textbook. This is not required, however, some students may find it provides additional insights.

### Other Materials

Material such as lecture slides and recordings, examples, datasets, etc will be made available on the unit web site as the unit progresses.

### Learning and Teaching Activities

This unit is taught as a mix of lectures and tutorials. The lectures are designed to provide a description of the econometric tools and techniques necessary for this unit and the theory of statistics which supports them. The lectures include numerous examples of the use of the tools

in applied problems. Students can reinforce their learning by solving applied problems using the same tools in tutorials and in their own private study. ECON2032 relies heavily on independent learning where students read the relevant chapter(s), revise lecture notes, and practice the techniques by attempting the tutorial questions.

### **Pre-recorded Lectures (Online, 1-2 hours for each week)**

Pre-recorded lectures provide an overview of the key concepts and the framework for each topic. Students are expected to familiarise themselves with the key concepts before attending live lectures. Pre-recorded lectures will be available on iLearn. Any material contained in pre-recorded lectures should be considered examinable.

### **Live Lectures (Online, 1 hour for each week)**

Live lectures will provide a review of selected concepts and material from the pre-recorded lectures, as well as additional demonstrations of the use of the econometric software in applied problems. It is also an opportunity for students to provide feedback on their understanding of the concepts. Students are expected to deepen their understanding of the topic via live lectures. Links to live lectures will be available on iLearn.

### **Tutorials (Online or Face-to-Face, 1 hour for each week from week 2)**

Tutorials will be held weekly, starting from Week 2, and may be either online or face-to-face. Students must register in a tutorial class and generally will not be permitted to attend a tutorial class other than the one in which they are registered. Changes to tutorial enrolments may only be made using the online system subject to available capacity. The Unit Convenor cannot make enrolment changes on behalf of students. Changes to tutorial enrolments generally take up to 24 hours to be reflected on iLearn.

Each tutorial will consist of a set of practice questions, posted on iLearn at the end of each week in preparation for the following week. That is, Tutorial 1 will be posted on Friday of Week 1, in preparation for the first tutorial, which will occur in Week 2. Students should attempt the questions prior to their allocated tutorial hour.

During the tutorial hour, the tutor will demonstrate how to complete the practice questions, as well as provide assistance to any specific issues that students may have had with the questions. Students are also welcome to work through the tutorial questions with the tutor present during the tutorial hour.

It is worth emphasizing that the tutorial exercises quizzes, mid-session test, and final exam, will all be based heavily on type and style of practice questions covered in the tutorials. Students are likely to find that the best form of study for this course is to attend the tutorials and ensure they are comfortable with all the practice questions covered therein.

Outside the tutorials, the best way to get help with a problem is to post it on the online discussion forum.

## 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 [ask.mq.edu.au](http://ask.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/>



## 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/](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.