



# ECON2041

## Introductory Econometrics

Session 2, Special circumstances 2021

*Department of Economics*

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#### **Disclaimer**

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#### **Session 2 Learning and Teaching Update**

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of [units with mandatory on-campus classes/teaching activities](#).

Visit the [MQ COVID-19 information page](#) for more detail.

## General Information

Unit convenor and teaching staff

Unit convenor

Chris Heaton

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TBA on iLearn

Teaching Assistant

Colin Bowers

[colin.bowers@mq.edu.au](mailto:colin.bowers@mq.edu.au)

Credit points

10

Prerequisites

50cp at 1000 level or above including ((STAT150 or STAT1250 or STAT170 or STAT1170 or STAT171 or STAT1371) and (ECON110 or ECON111 or ECON1020))

Corequisites

Co-badged status

Unit description

This unit introduces some basic econometric techniques employed by economists in the analysis of economic relationships. These techniques are also used extensively in marketing and finance. Topics covered will usually include: estimation and hypothesis testing; simple and multiple regression; prediction; the interpretation and evaluation of regression models, including an elementary discussion of nonlinear modelling, heteroscedasticity, auto-correlation, multicollinearity and specification error; and the use of categorical or qualitative data in regression models.

## 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:** Analyse and apply key statistical concepts, including probability distributions, parameters and estimators, the sampling distribution of an estimator, point and interval

estimation, and hypothesis testing.

**ULO2:** Specify, estimate and interpret a regression model.

**ULO3:** Summarise and interpret the estimation results, and draw valid inferences utilising hypothesis tests.

**ULO4:** Critically evaluate the assumptions of a classical (or standard) regression model and the consequences of violation of the assumptions.

**ULO5:** Employ an econometric software program to solve an econometric problem.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Tutorial exercises</u>	10%	No	Weeks 2-13, Monday 10am
<u>Assignment 1</u>	20%	No	Week 8, Monday 7am
<u>Assignment 2</u>	20%	No	Week 12, Monday 7am
<u>Online final examination</u>	50%	No	Scheduled by the University

### Tutorial exercises

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

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Weeks 2-13, Monday 10am**

Weighting: **10%**

Each tutorial assessment covers material from previous lectures, with an emphasis on the most recent work.

On successful completion you will be able to:

- Specify, estimate and interpret a regression model.
- Summarise and interpret the estimation results, and draw valid inferences utilising hypothesis tests.
- Employ an econometric software program to solve an econometric problem.

### Assignment 1

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

Indicative Time on Task <sup>2</sup>: 16 hours

Due: **Week 8, Monday 7am**

Weighting: **20%**

A set of questions requiring both calculation and short written answers. It will be based on material covered in the lectures prior to the submission deadline.

On successful completion you will be able to:

- Specify, estimate and interpret a regression model.
- Summarise and interpret the estimation results, and draw valid inferences utilising hypothesis tests.
- Employ an econometric software program to solve an econometric problem.

## Assignment 2

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

Indicative Time on Task <sup>2</sup>: 16 hours

Due: **Week 12, Monday 7am**

Weighting: **20%**

A set of questions requiring both calculation and short written answers. It will be based on material covered in the lectures prior to the submission deadline.

On successful completion you will be able to:

- Specify, estimate and interpret a regression model.
- Summarise and interpret the estimation results, and draw valid inferences utilising hypothesis tests.
- Employ an econometric software program to solve an econometric problem.

## Online final examination

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

Indicative Time on Task <sup>2</sup>: 35 hours

Due: **Scheduled by the University**

Weighting: **50%**

A 2 hour open book examination, consisting of short answer questions that require both calculation and written responses, will be held during the University Examination Period

On successful completion you will be able to:

- Analyse and apply key statistical concepts, including probability distributions, parameters and estimators, the sampling distribution of an estimator, point and interval estimation, and hypothesis testing.
- Summarise and interpret the estimation results, and draw valid inferences utilising hypothesis tests.
- Critically evaluate the assumptions of a classical (or standard) regression model and the consequences of violation of the assumptions.

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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

### Classes

- Online lectures will be available each week. Lecture slides and the data sets used for examples in the lectures will also be available on iLearn. The lectures cover all the material necessary to pass the unit, including some material that is not available in other formats. Consequently, students are expected to study the lectures closely.
- There is a tutorial class held in each week except Week 1. 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.
- Students must complete and submit the tutorial exercises each week before the deadline, which will be prior to the first scheduled class each week. The tutorial exercises will be discussed in class. After the completion of the last scheduled class of the week, students will be permitted to re-attempt the tutorial. Details of the marking scheme will be made available on iLearn.
- The timetable for classes can be found on the University website:

<http://www.timetables.mq.edu.au/>

- Students are expected to study all lectures, attempt the tutorial exercises, attend the tutorial classes, discuss the unit material both in-class and online, read the text, and attempt the set exercises. It is important that students identify problems that they are having with the unit material each week. If a reasonable but unsuccessful effort has been made to solve a problem, then the student should seek help from the tutor during the tutorial. Outside class time, the best way to get help with a problem is to post it on the online discussion forum.
- It is expected that students will spend an average of approximately 10 hours per week working on ECON2041 (including class time).

### **Required and Recommended texts and/or materials**

- [Wooldridge, J. M., Wadud, M., Lye, J. and Joyeux, R. \(2021\) Introductory Econometrics \(2nd Asia-Pacific ed.\) Cengage.](#)

#### *Additional useful textbooks and resources.*

- Hill, C. H., Griffiths, W. E. and Lim, G. C. (2018) Principles of Econometrics (5th ed.) Wiley.
- Gujarati, D.N., and Porter, D.C. (2010) Essentials of Econometrics (4th ed.) McGraw-Hill.
- Stock, J.H., and Watson, M.W. (2015) Introduction to Econometrics (3rd ed.) Pearson Education.
- A list of prescribed reading will be developed on the website as the unit progresses.
- The data sets used in the textbook and in lectures will be provided on the website.

### **Technology Used and Required**

- The main software package used in ECON2041 is Gretl (<http://gretl.sourceforge.net/>). This software is available for use on AppStream and may be freely downloaded for use elsewhere. The Microsoft Windows version is available at <http://gretl.sourceforge.net/win32/>. A Mac version is available at <http://gretl.sourceforge.net/osx.html>. Linux users should check their repositories or download the rpm or source from <http://gretl.sourceforge.net/>.
- The use of a spreadsheet will often be helpful for tasks in this unit. Microsoft Excel will be used during tutorials and is available for students to use off-campus at <https://wiki.mq.edu.au/display/microsoftstu/About?sessionId=E26834FF0E276C3384E93466EE687514>. For students who don't

wish to use Microsoft Excel, free alternatives include OpenOffice (<http://www.openoffice.org>), LibreOffice (<https://www.libreoffice.org/>) and Gnumeric (<http://www.gnumeric.org/>, [https://portableapps.com/apps/office/gnumeric\\_portable](https://portableapps.com/apps/office/gnumeric_portable)).

- Course material is available on the learning management system (iLearn).
- Announcements will be made regularly on iLearn. Students should ensure that these announcements, and posts on the online discussion forum, are forwarded to their email account, which they should check regularly. Staff may also occasionally directly email students. Students must check their email daily.
- Students will need access to an internet-connected computer capable of streaming video and participating in Zoom meetings.

## 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](#)
- [Grade Appeal Policy](#)
- [Complaint Management 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](#) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [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

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](mailto: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/](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.

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Unit information based on version 2021.04 of the [Handbook](#)