



## UNSW Course Outline

# ECON6309 Economic Measurement - 2024

Published on the 25 Aug 2024

## General Course Information

Course Code : ECON6309

Year : 2024

Term : Term 3

Teaching Period : T3

Is a multi-term course? : No

Faculty : UNSW Business School

Academic Unit : School of Economics

Delivery Mode : In Person

Delivery Format : Standard

Delivery Location : Kensington

Campus : Sydney

Study Level : Postgraduate

Units of Credit : 6

### Useful Links

[Handbook Class Timetable](#)

## Course Details & Outcomes

### Course Description

This course covers the theory and practice of economic measurement, including the measurement of key economic indicators such as the Consumer Price Index, Gross Domestic Product and productivity growth.

Approaches employed by international statistical agencies will be highlighted, along with the possibility that policy implications are often reliant on the choice of measurement techniques. The course will be technically rigorous, particularly in the use of microeconomic theory and econometric analysis, and will draw on the latest international research developments.

## **Course Aims**

The aim of this course is to provide a solid foundation in the field of economic measurement. This is not only valuable in itself, but also aids in the understanding of data sources, uses and reliability, which can enhance empirical modelling and understanding. A side objective is to practice rigorous economic and mathematical reasoning to enhance analytical skills. In addition, the course provides opportunities for developing applied research, technical writing, collaboration and communication skills, which are of great value in the workplace and in studying other courses.

## Course Learning Outcomes

Course Learning Outcomes	Program learning outcomes
CLO1 : Analyze and synthesize up-to-date bodies of knowledge, through research-led teaching.	<ul style="list-style-type: none"> <li>• PL01 : Business Knowledge</li> <li>• PL06 : Global and Cultural Competence</li> </ul>
CLO2 : Develop and integrate a global outlook, through awareness of similarities and differences across borders.	<ul style="list-style-type: none"> <li>• PL02 : Problem Solving</li> <li>• PL06 : Global and Cultural Competence</li> </ul>
CLO3 : Produce and organize written work for logical and professional presentation.	<ul style="list-style-type: none"> <li>• PL03 : Business Communication</li> <li>• PL06 : Global and Cultural Competence</li> </ul>
CLO4 : Articulate and evaluate ideas in a succinct and clear manner.	<ul style="list-style-type: none"> <li>• PL03 : Business Communication</li> <li>• PL06 : Global and Cultural Competence</li> <li>• PL07 : Leadership Development</li> </ul>
CLO5 : Coordinate and integrate efforts collaboratively to complete a task.	<ul style="list-style-type: none"> <li>• PL04 : Teamwork</li> <li>• PL06 : Global and Cultural Competence</li> <li>• PL07 : Leadership Development</li> </ul>
CLO6 : Implement and demonstrate skilled, responsible, imaginative, ethical, and flexible professional practice.	<ul style="list-style-type: none"> <li>• PL05 : Responsible Business Practice</li> <li>• PL06 : Global and Cultural Competence</li> <li>• PL07 : Leadership Development</li> </ul>

Course Learning Outcomes	Assessment Item
CLO1 : Analyze and synthesize up-to-date bodies of knowledge, through research-led teaching.	<ul style="list-style-type: none"> <li>• Research assignment</li> <li>• Final exam</li> <li>• Problem Sets</li> </ul>
CLO2 : Develop and integrate a global outlook, through awareness of similarities and differences across borders.	<ul style="list-style-type: none"> <li>• Research assignment</li> <li>• Final exam</li> <li>• Problem Sets</li> </ul>
CLO3 : Produce and organize written work for logical and professional presentation.	<ul style="list-style-type: none"> <li>• Research assignment</li> <li>• Final exam</li> <li>• Problem Sets</li> </ul>
CLO4 : Articulate and evaluate ideas in a succinct and clear manner.	<ul style="list-style-type: none"> <li>• Research assignment</li> <li>• Final exam</li> <li>• Problem Sets</li> </ul>
CLO5 : Coordinate and integrate efforts collaboratively to complete a task.	<ul style="list-style-type: none"> <li>• Research assignment</li> <li>• Problem Sets</li> </ul>
CLO6 : Implement and demonstrate skilled, responsible, imaginative, ethical, and flexible professional practice.	<ul style="list-style-type: none"> <li>• Final exam</li> <li>• Research assignment</li> <li>• Problem Sets</li> </ul>

## Learning and Teaching Technologies

Moodle - Learning Management System

# Learning and Teaching in this course

## Learning and Teaching Strategies:

### Lectures

Pre-prepared video recordings for the lectures will be placed on the Moodle site. Students should view these videos and related materials. It is expected that it will take students at least 90 minutes to view and review these recordings. The scheduled class time is Mondays 1:00-4:00. The time 1:00-2:00 can be used for viewing and reviewing these recordings. There will be an in-person session with the Lecturer 2:00-4:00, during which time he will go through the lecture material in more detail, provide extra examples, and answer questions. The purpose of lectures is to provide a logical structure for the topics that make up the course; to emphasise the important principles/concepts/methods of each topic; and to provide relevant examples to which the principles/concepts/methods are applied.

### Tutorials

Tutorial exercises will be set each week, starting from Week 2. Students should attempt these before attending the in-person session on Mondays, 2:00-4:00. The tutorials are an integral part of the subject and significant time during the online session will be used for this purpose. Tutorial presentations, discussions, and solutions to problems are designed to help students deepen their understanding and practice learnt material.

### Out-of-Class Study

While students may have preferred individual learning strategies, it is important to note that most learning will be achieved outside of class time. Lectures can only provide a structure to assist your study, and tutorial time is limited. An “ideal” weekly strategy (on which the provision of the course materials is based) might include:

- View the relevant pre-prepared video recordings and read the relevant chapter(s) of the text and lecture slides before attending the online component of the lecture.
- Attend the online lecture. Here the context of the topic in the course and the important elements of the topic.
- Attempt tutorial tasks and questions before attending the class. This helps you identify issues that can be discussed and resolved in the class.

# Assessments

## Assessment Structure

Assessment Item	Weight	Relevant Dates	Program learning outcomes
Research assignment Assessment Format: Individual	40%	Start Date: Part 1: Week 6; Part 2: Week 7 Due Date: Part 1: Thursday of Week 7; Part 2: Thursday of Week 10	<ul style="list-style-type: none"><li>• PL01 : Business Knowledge</li><li>• PL03 : Business Communication</li><li>• PL06 : Global and Cultural Competence</li><li>• PL05 : Responsible Business Practice</li><li>• PL07 : Leadership Development</li><li>• PL02 : Problem Solving</li><li>• PL04 : Teamwork</li></ul>
Final exam Assessment Format: Individual	50%	Start Date: Centrally timetabled Due Date: Centrally timetabled	<ul style="list-style-type: none"><li>• PL01 : Business Knowledge</li><li>• PL02 : Problem Solving</li><li>• PL03 : Business Communication</li><li>• PL05 : Responsible Business Practice</li><li>• PL06 : Global and Cultural Competence</li><li>• PL07 : Leadership Development</li></ul>
Problem Sets Assessment Format: Individual	10%	Start Date: Problem Set 1: Thursday of Week 2; Problem Set 2: Thursday of Week 4 Due Date: Problem Set 1: Thursday of Week 3; Problem Set 2: Thursday of Week 5	<ul style="list-style-type: none"><li>• PL01 : Business Knowledge</li><li>• PL02 : Problem Solving</li><li>• PL03 : Business Communication</li><li>• PL04 : Teamwork</li><li>• PL05 : Responsible Business Practice</li><li>• PL06 : Global and Cultural Competence</li><li>• PL07 : Leadership Development</li></ul>

## Assessment Details

### Research assignment

#### Assessment Overview

This will consist of two parts. The research assignment is intended to help students develop applied research and technical writing skills. It will include practical tasks involving (i) price index construction using scanner data and official price quotes from a national statistical office, and (ii) topics in productivity measurement.

### **Course Learning Outcomes**

- CL01 : Analyze and synthesize up-to-date bodies of knowledge, through research-led teaching.
- CL02 : Develop and integrate a global outlook, through awareness of similarities and differences across borders.
- CL03 : Produce and organize written work for logical and professional presentation.
- CL04 : Articulate and evaluate ideas in a succinct and clear manner.
- CL05 : Coordinate and integrate efforts collaboratively to complete a task.
- CL06 : Implement and demonstrate skilled, responsible, imaginative, ethical, and flexible professional practice.

### **Assessment Length**

There is no length restriction

### **Assignment submission Turnitin type**

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

### **Generative AI Permission Level**

#### **No Assistance**

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.

For more information on Generative AI and permitted use please see [here](#).

### **Final exam**

### **Assessment Overview**

The final exam will cover the entire course. All material covered in the course is examinable.

### **Course Learning Outcomes**

- CL01 : Analyze and synthesize up-to-date bodies of knowledge, through research-led teaching.
- CL02 : Develop and integrate a global outlook, through awareness of similarities and differences across borders.
- CL03 : Produce and organize written work for logical and professional presentation.
- CL04 : Articulate and evaluate ideas in a succinct and clear manner.
- CL06 : Implement and demonstrate skilled, responsible, imaginative, ethical, and flexible professional practice.

### **Assessment Length**

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## **Problem Sets**

### **Assessment Overview**

Two problem sets, worth 5% each, will count towards the final mark. Further details will be provided in the first lecture. These will provide opportunities for developing deeper understanding of the theory underlying economic measurement, and the development of empirical analysis skills.

### **Course Learning Outcomes**

- CL01 : Analyze and synthesize up-to-date bodies of knowledge, through research-led teaching.
- CL02 : Develop and integrate a global outlook, through awareness of similarities and differences across borders.
- CL03 : Produce and organize written work for logical and professional presentation.
- CL04 : Articulate and evaluate ideas in a succinct and clear manner.
- CL05 : Coordinate and integrate efforts collaboratively to complete a task.
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## General Assessment Information

### Grading Basis

Standard

### Requirements to pass course

In order to pass this course students must:

- Achieve a composite mark of at least 50 out of 100
- Engage actively in course learning activities and attempt all assessment requirements
- Meet any additional requirements specified in the assessment details
- Meet the specified attendance requirements of the course (see Schedule section)

## Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 9 September - 15 September	Lecture	Topic: Intro to Economic Measurement and Index Number Theory Readings: Lecture Book chapters 1 & 2
Week 2 : 16 September - 22 September	Lecture	Topic: The Cost of Living Reading: Lecture Book Chapter 3
Week 3 : 23 September - 29 September	Lecture	Topic: Elementary Indexes Reading: Lecture Book Chapter 4 Problem Set 1 due, 4pm on Thursday of this week
Week 4 : 30 September - 6 October	Lecture	Topic: Adjusting for Quality Change Reading: Lecture Book Chapter 5
Week 5 : 7 October - 13 October	Lecture	NO LECTURE THIS WEEK: PUBLIC HOLIDAY Problem Set 2 due, 4pm on Thursday of this week.
Week 6 : 14 October - 20 October	Lecture	NO LECTURE THIS WEEK
Week 7 : 21 October - 27 October	Lecture	Topic: Measurement of Capital Reading: Lecture Book Chapter 6 Research Assignment Part 1 due, 4pm on Thursday of this week.
Week 8 : 28 October - 3 November	Lecture	Topic: Measurement of Labour and Income Readings: Lecture Book Chapters 7 & 8
Week 9 : 4 November - 10 November	Lecture	Topic: Productivity Growth Reading: Lecture Book Chapter 9
Week 10 : 11 November - 17 November	Lecture	Topic: Research Directions Reading: Readings posted on the Moodle site Research Assignment Part 2 due, 4pm on Thursday of this week.

## Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.



# Course Resources

## Prescribed Resources

The website for this course is on UNSW Moodle .

There is no required textbook for this course. A lecture book will be made available. Readings will be assigned for each topic, as appropriate. In particular, we will make use of three sources of notes that have been prepared by Professor W. Erwin Diewert of the University of British Columbia and UNSW, with titles (and abbreviations) as follows:

- Index Number Theory and Measurement Economics ("INTME").
- The Measurement of Business Capital, Income and Performance ("Barcelona Lectures").
- Applied Economics ("AE").

These notes are available through the links at the following website: <https://economics.ubc.ca/faculty-and-staff/w-erwin-diewert/>

We will also make reference to the academic research papers and publications of international agencies, such as:

- OECD Productivity Manual.
- OECD Capital Manual.
- CPI Manual (International Labour Office).

## Recommended Resources

1. The Society for Economic Measurement (SEM) "was founded to promote research on economic measurement, using advanced tools from economic theory, econometrics, aggregation theory, experimental economics, mathematics, and statistics". The website provides links to conference information and other resources. Membership is free, and students are encouraged to become members .
2. The Centre for the Study of Living Standards (CSLS) publishes the International Productivity Monitor, which publishes articles which are "largely nontechnical in nature and understandable to a wide audience of productivity researchers and analysts as well as the general public". CSLS also publishes various interesting reports.
3. The International Association for Research in Income and Wealth publishes the academic journal. Review of Income and Wealth, and organises conferences with economic measurement themes: International Association for Research in Income and Wealth.

## Course Evaluation and Development

Feedback is regularly sought from students and continual improvements are made based on this feedback. At the end of this course, you will be asked to complete the [myExperience survey](#),

which provides a key source of student evaluative feedback. Your input into this quality enhancement process is extremely valuable in assisting us to meet the needs of our students and provide an effective and enriching learning experience. The results of all surveys are carefully considered and do lead to action towards enhancing educational quality.

The School of Economics strives to be responsive to student feedback. If you would like more information on how the design of this course and changes made to it over time have taken students' needs and preferences into account, please contact the Director of Education at the School of Economics.

Students' course evaluations are very important for the further development of this course. Feedback provided by previous students has led to significant improvements in assessment items, review questions, exercises, and clarity of illustration. Previous students told us that the best things about the course were:

- Very good structure and teaching style
- Course notes are an exceptional resource
- Course content is very useful for a professional economist
- The assignments are very useful, practical tasks for future professionals (and researchers)
- Learning was fun, stimulating, and encouraging, with good in-class discussion

Previous students told us that the following could be improved:

- Rather than have the whole Research Assignment due at the end of the Term, break it up into two parts with different due dates.

### **Consent for De-Identified Data to be Used for Secondary Research into Improving Student Experience**

To enhance your student experience, researchers at UNSW conduct academic research that involves the use of de-identified student data, such as assessment outcomes, course grades, course engagement and participation, etc. Students of this course are being invited to provide their consent for their de-identified data to be shared with UNSW researchers for research purposes after the course is completed.

Providing consent for your de-identified data to be used in academic research is voluntary and not doing so will not have an impact on your course grades.

Researchers who want to access your de-identified data for future research projects will need to submit individual UNSW Ethics Applications for approval before they can access your data.

A full description of the research activities aims, risks associated with these activities and how your privacy and confidentiality will be protected at all times can be found [here](#).

If you **consent** to have your de-identified data used for academic research into improving student experience, you do not need to do anything. Your consent will be implied, and your data may be used for research in a format that will not individually identify you after the course is completed.

If you **do not consent** for this to happen, please email the [opt-out form](#) to [seer@unsw.edu.au](mailto:seer@unsw.edu.au) to opt-out from having your de-identified data used in this manner. If you complete the opt-out form, the information about you that was collected during this course will not be used in academic research.

## Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Kevin Fox		QUAD 3119	9385 3320	Mondays 11am - 12 noon, and by appointment	No	Yes

## Other Useful Information

### Academic Information

#### COURSE POLICIES AND SUPPORT

The Business School expects that you are familiar with the contents of this course outline and the UNSW and Business School learning expectations, rules, policies and support services as listed below:

- Program Learning Outcomes
- Academic Integrity and Plagiarism
- Student Responsibilities and Conduct
- Special Consideration
- Protocol for Viewing Final Exam Scripts

- Student Learning Support Services

Further information is provided on the [Policies and Guidelines](#) page.

Students may not circulate or post online any course materials such as handouts, exams, syllabi or similar resources from their courses without the written permission of their instructor.

## STUDENT LEARNING OUTCOMES

The Course Learning Outcomes (CLOs) – under the Outcomes tab – are what you should be able to demonstrate by the end of this course, if you participate fully in learning activities and successfully complete the assessment items.

CLOs also contribute to your achievement of the Program Learning Outcomes (PLOs), which are developed across the duration of a program. PLOs are, in turn, directly linked to [UNSW graduate capabilities](#). More information on Coursework PLOs is available on the [Policies and Guidelines](#) page. For PG Research PLOs, including MPDBS, please refer to [UNSW HDR learning outcomes](#).

## Academic Honesty and Plagiarism

As a student at UNSW you are expected to display [academic integrity](#) in your work and interactions. Where a student breaches the [UNSW Code of Conduct](#) with respect to academic integrity, the University may take disciplinary action. To assure academic integrity, you may be required to demonstrate reasoning, research and the process of constructing work submitted for assessment.

To assist you in understanding what academic integrity means, and how to ensure that you do comply with the UNSW Code of Conduct, it is strongly recommended that you complete the [Working with Academic Integrity](#) module before submitting your first assessment task. It is a free, online self-paced Moodle module that should take about one hour to complete.

## Submission of Assessment Tasks

### SHORT EXTENSIONS

Short Extension is a new process that allows you to apply for an extended deadline on your assessment without the need to provide supporting documentation, offering immediate approval during brief, life-disrupting events. Requests are automatically approved once submitted.

Short extensions are ONLY available for some assessments. Check your course outline or Moodle to see if this is offered for your assessments. Where a short extension exists, all students enrolled in that course in that term are eligible to apply. Further details are available the UNSW [Current Students](#) page.

## **SPECIAL CONSIDERATION**

You can apply for special consideration when illness or other circumstances beyond your control interfere with your performance in a specific assessment task or tasks, including online exams. Special consideration is primarily intended to provide you with an extra opportunity to demonstrate the level of performance of which you are capable.

Applications can only be made online and will NOT be accepted by teaching staff. Applications will be assessed centrally by the Case Review Team, who will update the online application with the outcome and add any relevant comments. The change to the status of the application immediately sends an email to the student and to the assessor with the outcome of the application. The majority of applications will be processed within 3-5 working days.

For further information, and to apply, see Special Consideration on the UNSW [Current Students](#) page.

## **LATE SUBMISSION PENALTIES**

### **LATE SUBMISSION PENALTIES**

For assessments other than examinations, late submission will incur a penalty of 5% per day or part thereof (including weekends) from the due date and time. An assessment will not be accepted after 5 days (120 hours) of the original deadline unless special consideration has been approved. In the case of an approved Equitable Learning Plan (ELP) provision, special consideration or short extension, the late penalty applies from the date of approved time extension. After five days from the extended deadline, the assessment cannot be submitted.

An assessment is considered late if the requested format, such as hard copy or electronic copy, has not been submitted on time or where the 'wrong' assessment has been submitted.

For assessments which account for 10% or less of the overall course grade, and where answers are immediately discussed or debriefed, the LIC may stipulate a different penalty. Details of such late penalties will be available on the course Moodle page.

## FEEDBACK ON YOUR ASSESSMENT TASK PERFORMANCE

Feedback on student performance from formative and summative assessment tasks will be provided to students in a timely manner. Assessment tasks completed within the teaching period of a course, other than a final assessment, will be assessed and students provided with feedback, with or without a provisional result, within 10 working days of submission, under normal circumstances. Feedback on continuous assessment tasks (e.g. laboratory and studio-based, workplace-based, weekly quizzes) will be provided prior to the midpoint of the course.

## Faculty-specific Information

### PROTOCOL FOR VIEWING FINAL EXAM SCRIPTS

UNSW students have the right to view their final exam scripts, subject to a small number of very specific exemptions. The UNSW Business School has set a [protocol](#) under which students may view their final exam script. Individual schools within the Faculty may also set up additional local processes for viewing final exam scripts, so it is important that you check with your School.

If you are completing courses from the following schools, please note the additional school-specific information:

- Students in the **School of Accounting, Auditing & Taxation** who wish to view their final examination script should also refer to [this page](#).
- Students in the **School of Banking & Finance** should also refer to [this page](#).
- Students in the **School of Information Systems & Technology Management** should also refer to [this page](#).

### COURSE EVALUATION AND DEVELOPMENT

Feedback is regularly sought from students and continual improvements are made based on this feedback. At the end of this course, you will be asked to complete the [myExperience survey](#), which provides a key source of student evaluative feedback. Your input into this quality enhancement process is extremely valuable in assisting us to meet the needs of our students and provide an effective and enriching learning experience. The results of all surveys are carefully considered and do lead to action towards enhancing educational quality.

## QUALITY ASSURANCE

The Business School is actively monitoring student learning and quality of the student experience in all its programs. A random selection of completed assessment tasks may be used

for quality assurance, such as to determine the extent to which program learning goals are being achieved. The information is required for accreditation purposes, and aggregated findings will be used to inform changes aimed at improving the quality of Business School programs. All material used for such processes will be treated as confidential.

## TEACHING TIMES AND LOCATIONS

Please note that teaching times and locations are subject to change. Students are strongly advised to refer to the [Class Timetable website](#) for the most up-to-date teaching times and locations.