ECON4106 Policy Evaluation Methods - 2024

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General Course Information

Course Code : ECON4106
Year : 2024
Term : Term 1
Teaching Period : T1
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 : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

This course provides a set of statistical tools and research designs that are useful in conducting empirical research in applied microeconomics and related fields. Because of the importance of economic research with direct policy implications, the focus will be on methods for estimating

causal effects. We will critically discuss various techniques and indicate strengths and weaknesses. We will review several different approaches to program evaluation and apply these methods to real data, in the context of policies and programs in a broad range of areas including development, labour markets, health care, political economy, social welfare and poverty, education, and crime. The course will equip students with the necessary knowledge to be able to conduct program evaluations and to be informed consumers of such research.

Course Aims

The course aims to endow students with tools relevant in evaluating programs, and to develop students' skills in conducting economic research. This course is an option available for students enrolled in an Honours or post-graduate program in economics or commerce. The course relies considerably on methods of data analysis: tools learned in an intermediate econometrics course such as ECON2206 are assumed knowledge in the course. The course is suitable both for those students interested in evaluation techniques for any type of program or policy, and for students interested in the conduct of applied microeconometric work generally.

Relationship to Other Courses

Course Learning Outcomes

Course Learning Outcomes	Program learning outcomes
CLO1 : Identify and describe the difference between correlation and causation. Understand the differentiation in research applications.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO5 : Responsible Business Practice • PLO6 : Global and Cultural Competence • PLO7 : Leadership Development
CLO2 : Understand the advantages and drawbacks of different designs and empirical techniques used for policy evaluation, such as Randomised Controlled Trials, Difference in Differences, Instrumental Variables, Regression Discontinuity Designs and Event Studies. Identify appropriate application of policy evaluation methods to research.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO5 : Responsible Business Practice • PLO6 : Global and Cultural Competence • PLO7 : Leadership Development
CLO3 : Apply appropriate design and technique in order to achieve causal identification relevant to a particular policy issue	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO5 : Responsible Business Practice • PLO6 : Global and Cultural Competence • PLO7 : Leadership Development
CLO4 : Demonstrate an understanding of the relevant and appropriate empirical implementation of all the aforementioned techniques	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO4 : Teamwork • PLO6 : Global and Cultural Competence • PLO7 : Leadership Development

Course Learning Outcomes	Assessment Item
CLO1 : Identify and describe the difference between correlation and causation. Understand the differentiation in research applications.	• Problem sets • Seminar Oral presentations • Final exam
CLO2 : Understand the advantages and drawbacks of different designs and empirical techniques used for policy evaluation, such as Randomised Controlled Trials, Difference in Differences, Instrumental Variables, Regression Discontinuity Designs and Event Studies. Identify appropriate application of policy evaluation methods to research.	• Problem sets • Seminar Oral presentations • Final exam
CLO3 : Apply appropriate design and technique in order to achieve causal identification relevant to a particular policy issue	• Problem sets • Seminar Oral presentations • Final exam
CLO4 : Demonstrate an understanding of the relevant and appropriate empirical implementation of all the aforementioned techniques	• Problem sets • Seminar Oral presentations • Final exam

Learning and Teaching Technologies

Moodle - Learning Management System

Learning and Teaching in this course

Lectures, seminars and assessments have been designed to appropriately challenge students and support the achievement of the desired learning outcomes. A climate of inquiry and dialogue is encouraged between students and teachers and among students. The lecturer aims to provide meaningful and timely feedback to students to improve learning outcomes.

Quantitative information and statistics are pervasive not only in the study of economics and business but in understanding a wide range of phenomena. Every attempt will be made to demonstrate the relevance of the course to understanding such phenomena.

General principles or guidelines for undertaking applied work are discussed in the course. In particular, we will stress careful data analysis, the need to evaluate estimated models, and the importance of the links between econometric models and the underlying substantive knowledge or theory associated with the particular application. These issues will be related to applications drawn from various fields.

Learning Activities and Teaching Strategies

Five basic learning activities are utilised in this course: studying of lecture material, reading of additional material, presentation of relevant material, discussion of issues, and writing.

Lectures will be delivered face-to-face. In the lectures, the lecturer will give an **overview** of the specific topic, emphasise the challenges faced in research and practice, introduce state-of-the-art research tools to tackle problems, discuss relevant background literature, and point to open research questions. Attending the lectures live is highly recommended but recording of the lectures will be made available if needed.

Students are expected to prepare for the class by **reading** the assigned literature for the week.

Seminars will bedelivered face-to-face. In each seminar, students will discuss questions in teams and make **presentations**. Presenting in class improves your organisational and communication skills. Each week, a paper illustrating the lecture material covered in that week will be assigned for the following week's seminar. In the first part of the seminar, individuals will be placed in

groups. Each group will be assigned one question. In the second half of the seminar, one student from each group will present the answer to the class. The presentations will be 5 to 10 minutes long for each group, depending on the number of groups. The number of students in each group and the number of groups will depend on the size of the class. The total mark for the seminar presentation will be determined by a student's individual presentation performance in this part of the seminar.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates	Program learning outcomes
Problem sets Assessment Format: Individual	60%	Start Date: PS given out in Weeks 4,5,7 Due Date: Due before 6 PM on Friday of Weeks 5, 6 and 8	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO5 : Responsible Business Practice • PLO6 : Global and Cultural Competence • PLO7 : Leadership Development
Seminar Oral presentations Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: Not Applicable	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO4 : Teamwork • PLO5 : Responsible Business Practice • PLO6 : Global and Cultural Competence • PLO7 : Leadership Development
Final exam Assessment Format: Individual	20%	Start Date: Not Applicable Due Date: Not Applicable	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO5 : Responsible Business Practice • PLO6 : Global and Cultural Competence • PLO7 : Leadership Development

Assessment Details
Problem sets

<u>Assessment Overview</u>

A major component of the course assessment will be **problem sets**. Data will be provided for the problem sets and you will have to run some analysis using the techniques seen in class.

<u>Course Learning Outcomes</u>

- CLO1 : Identify and describe the difference between correlation and causation. Understand the differentiation in research applications.
- CLO2 : Understand the advantages and drawbacks of different designs and empirical techniques used for policy evaluation, such as Randomised Controlled Trials, Difference in Differences, Instrumental Variables, Regression Discontinuity Designs and Event Studies. Identify appropriate application of policy evaluation methods to research.
- CLO3 : Apply appropriate design and technique in order to achieve causal identification relevant to a particular policy issue
- CLO4 : Demonstrate an understanding of the relevant and appropriate empirical implementation of all the aforementioned techniques

<u>Detailed Assessment Description</u>

A major component of the course assessment will be **problem sets**. Three problem sets will be assigned and must be turned in before 6 PM on Friday of the week they are due. Problems sets will be given out in Weeks 4, 5 and 7, and will be due in Weeks 5, 6 and 8, respectively. Data will be provided for the problem sets and you will have to run some analysis using the techniques seen in class. You will need to turn in your programming (do-files if you are using STATA) and your answers to questions on separate sheets. Each problem set will take significant time to prepare. Hence, you should not leave it to the last minute, or you will be unable to complete it.

Each problem set is 20% of the final mark.

<u>Assessment Length</u>

NA

<u>Assignment submission Turnitin type</u>

Not Applicable

Seminar Oral presentations

<u>Assessment Overview</u>

In the seminars, students will be asked to discuss and present answers to questions based on a

pre-assigned paper. This paper will illustrate some of the material covered in the lecture in the previous week.

Course Learning Outcomes

- CLO1 : Identify and describe the difference between correlation and causation. Understand the differentiation in research applications.
- CLO2 : Understand the advantages and drawbacks of different designs and empirical techniques used for policy evaluation, such as Randomised Controlled Trials, Difference in Differences, Instrumental Variables, Regression Discontinuity Designs and Event Studies. Identify appropriate application of policy evaluation methods to research.
- CLO3 : Apply appropriate design and technique in order to achieve causal identification relevant to a particular policy issue
- CLO4 : Demonstrate an understanding of the relevant and appropriate empirical implementation of all the aforementioned techniques

Detailed Assessment Description

In the seminars, students will be asked to discuss and present answers to questions based on a pre-assigned paper. This paper will illustrate some of the material covered in the lecture of the week. In the first part of the seminar, students will be divided into teams (decided at the beginning of the term) to discuss the questions.

In the second half of the seminar, an individual student from each team presents the answers to the class based on group work and on her/his own judgment of the material. Every student will have the chance to present at least once during the term. The total mark for the seminar oral presentation will be determined by a student's individual presentation performance in this part of the seminar.

After the individual presentations, the discussion will be open to the whole class.

Students should come to seminars prepared to participate in the class discussions; i.e., they are expected to review the material covered in the week, read the pre-assigned paper in advance, and participate in discussions.

Assessment Length

NA

Assignment submission Turnitin type

Not Applicable

Final exam

Assessment Overview

As with the problem sets, in the final exam, you will be provided with a data set and asked to run some analyses using the techniques covered in class.

Course Learning Outcomes

- CLO1 : Identify and describe the difference between correlation and causation. Understand the differentiation in research applications.
- CLO2 : Understand the advantages and drawbacks of different designs and empirical techniques used for policy evaluation, such as Randomised Controlled Trials, Difference in Differences, Instrumental Variables, Regression Discontinuity Designs and Event Studies. Identify appropriate application of policy evaluation methods to research.
- CLO3 : Apply appropriate design and technique in order to achieve causal identification relevant to a particular policy issue
- CLO4 : Demonstrate an understanding of the relevant and appropriate empirical implementation of all the aforementioned techniques

Detailed Assessment Description

The final exam is an individual assessment. It consists of a take-home exam. As with the problem sets, in the final exam you will be provided with a data set and asked to run some analyses using the techniques covered in class. The final exam is due 1 week after it is made available on Moodle.

Assessment Length

NA

Assignment submission Turnitin type

Not Applicable

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 : 12 February - 18 February	Lecture	The fundamental problem of causal inference
	Reading	Readings on Moodle
Week 2 : 19 February - 25 February	Lecture	Selection on Observables
	Seminar	Seminar - Wed 12:00-13:30
	Reading	Readings on Moodle and Chapter 3 of Mostly Harmless Econometrics (MHE)
Week 3 : 26 February - 3 March	Other	No Lectures and Seminar this week
Week 4 : 4 March - 10 March	Lecture	Randomized Trials
	Seminar	Seminar - Wed 12:00-13:30
	Reading	Readings on Moodle and Chapter 2 of MHE
Week 5 : 11 March - 17 March	Lecture	Differences-in-Differences
	Seminar	Seminar - Wed 12:00-13:30
	Assessment	Hand-in Problem Set 1 by 6 PM on Friday
	Reading	Readings on Moodle and Chapter 5 of MHE
Week 6 : 18 March - 24 March	Other	FLEXIBILITY WEEK
	Assessment	Hand-in Problem Set 2 by 6 PM on Friday
Week 7 : 25 March - 31 March	Lecture	Regression Discontinuity
	Seminar	Seminar - Wed 12:00-13:30
	Reading	Readings on Moodle and Chapter 6 of MHE
Week 8 : 1 April - 7 April	Lecture	Instrumental Variables
	Seminar	Seminar - Wed 12:00-13:30
	Reading	Readings on Moodle and Chapter 4 of MHE
	Assessment	Hand-in Problem Set 3 by 6 PM on Friday
Week 9 : 8 April - 14 April	Lecture	Instrumental Variables
	Reading	Readings on Moodle and Chapter 4 of MHE
Week 10 : 15 April - 21 April	Lecture	Machine Learning and other issues

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](#).

The website contains: the course outline; the tutorial documents; the lecture notes; data used in

the tutorial problems and problem sets; course announcements; and other course hand-outs.

Students should consult this website at least once a week as it contains important information about the course. It will be assumed that all students have seen any notice posted on the course website.

The textbook for the course is:

- Angrist, J.D. and J.S. Pischke, Mostly Harmless Econometrics: An Empiricist's Companion, Princeton University Press, 2009.

A copy of this text has been placed in the High Use Collection in the UNSW Library, and via ebook, and copies are available at the bookstore.

Material from the textbook will be complemented with journal articles that can be downloaded from the respective journal websites through UNSW's library system.

For a complementary text see: Bueno de Mesquita and Fowler, Thinking Clearly with Data: A Guide to Quantitative Reasoning and Analysis

For background knowledge in intermediate econometrics, it is recommended that you consult either of the following texts:

- Cameron, A. Colin and Pravin Trivedi (2005). Micreconometrics: Methods and Applications. Cambridge University Press.
- Wooldridge, Jeffrey (2002). Econometric Analysis of Cross Section and Panel Data. MIT Press.

Both texts will be available in the High Use Collection of the UNSW Library. They will also be available for purchase from the bookstore.

Computing work

Computing is an important component of policy evaluation. The problem sets will require the use of econometric software. The econometric software used by the lecturers for this course is Stata. Stata is available remotely (see software access for students) or you can obtain a copy of Stata and install it on your own PC. To purchase your own copy, you will need to fill out a form and to pay the price of the version of Stata you choose to buy. For more information on Stata prices in Australia, see:

https://www.surveydesign.com.au/buystudent.html

There are lots of resources and support for Stata on the web. Particularly useful are the following websites:

- For general help, browse through [Institute for Digital Research and Education](#)
- You can work through a tutorial at: [Stata Tutoria](#)l

The manual: A.C. Acock, "A Gentle Introduction to Stata", 2nd edition, Stata Press, 2008 may be helpful and is available in the High Use Collection at the [UNSW Library](#).

Note that students do not need to buy their own copy of Stata, and can utilise UNSW [myAccess](#) service. It is also possible to complete the course using alternative software such as SAS, E-Views, or R. However, Microsoft Excel will not be sufficient. Solutions to problem sets will be provided in Stata only.

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.

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 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	Federico Masera		QUAD3127		Thursday 17:00 - 18:00 or 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 [key policies and support](#) 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 [key policies and support](#) page. For PG Research PLOs, including MPDBS, please refer to the [UNSW HDR Learning Outcomes](#).

Academic Honesty and Plagarism

As a student at UNSW you are expected to display [academic integrity](#) in your work and interactions. Where a student breaches the [UNSW Student Code](#) with respect to academic integrity, the University may take disciplinary action under the Student Misconduct Procedure. 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 Student Code, 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

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. Students studying remotely who have exams scheduled between 10pm and 7am local time, are also able to apply for special consideration to sit a supplementary exam at a time outside of

these hours.

Special consideration is primarily intended to provide you with an extra opportunity to demonstrate the level of performance of which you are capable. To apply, and for further information, see Special Consideration on the UNSW Current Students page.

Special consideration 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.

Please note the following:

1. Applications can only be made through Online Services in myUNSW (see the UNSW Current Students page). Applications will not be accepted by teaching staff. The lecturer-in-charge/ course coordinator will be automatically notified when your application is processed.
2. Applying for special consideration does not automatically mean that you will be granted a supplementary exam or other concession.
3. If you experience illness or misadventure in the lead up to an exam or assessment, you must submit an application for special consideration, either prior to the examination taking place, or prior to the assessment submission deadline, except where illness or misadventure prevent you from doing so.
4. If your circumstances stop you from applying before your exam or assessment due date, you must apply within 3 working days of the assessment or the period covered by your supporting documentation.
5. Under the UNSW Fit To Sit/Submit rule, if you sit the exam/submit an assignment, you are declaring yourself well enough to do so and are cannot subsequently apply for special consideration.
6. If you become unwell on the day of – or during – an exam, you must stop working on your exam, advise your course coordinator or tutor and provide a medical certificate dated within 24 hours of the exam, with your special consideration application. For online exams, you must contact your course coordinator or tutor immediately via email, Moodle or chat and advise them you are unwell and submit screenshots of your conversation along with your medical certificate and application.
7. Special consideration requests do not allow the awarding of additional marks to students.

Further information on Business School policy and procedure can be found under "Special Consideration" on the key policies and support page.

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