UNSW Course Outline

MFIN6201 Empirical Techniques and Applications in Finance - 2024

Published on the 21 May 2024

General Course Information

Course Code : MFIN6201
Year : 2024
Term : Term 2
Teaching Period : T2
Is a multi-term course? : No
Faculty : UNSW Business School
Academic Unit : School of Banking and Finance
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 is an introductory course in econometrics, the science of combining economic theory and statistical techniques to analyse economic data. The focus is on probability, statistical models, and estimation techniques. The least squares methodology for single explanatory and multiple

explanatory variables is covered. Additional topics will be covered as time permits. The course equips students to do basic empirical analysis on the financial markets, using appropriate software (e.g., Excel, Python, Stata) if needed.

Course Aims

The course aims to develop skills for applying econometric techniques necessary to conduct research in finance. The course expects that students are familiar with the basic statistical/ finance/mathematics taught at the undergraduate level or above, but will review key concepts, as necessary. This course helps students build a foundation for courses such as MFIN6210 that discuss how the techniques learned in this course are applied in the empirical finance literature.

Relationship to Other Courses

The course aims to develop skills for applying econometric techniques needed to conduct research in finance. This course helps students build a foundation for courses such as MFIN6210 that discuss how the techniques learned in this course are applied in the empirical finance literature.

Course Learning Outcomes

Course Learning Outcomes	Program learning outcomes
CLO1 : Explain the assumptions of OLS Regression models.	• PLO1 : Business Knowledge
CLO2 : Describe violations of classical assumptions and strategies to correct for these violations.	• PLO1 : Business Knowledge
CLO3 : Collect, interpret, and organize economic and financial data.	• PLO1 : Business Knowledge • PLO2 : Problem Solving
CLO4 : Use econometric techniques, software, and theory to interpret and analyse decisions faced by economic agents and entities.	• PLO1 : Business Knowledge • PLO2 : Problem Solving
CLO5 : Combine economic theories and econometrics tools to design empirical research, particularly developing, estimating, and analysing least square regressions to study relations among economic variables.	• PLO1 : Business Knowledge • PLO2 : Problem Solving
CLO6 : Communicate statistical analysis, results, and interpretation in a succinct and clear manner.	• PLO3 : Business Communication

Course Learning Outcomes	Assessment Item
CLO1 : Explain the assumptions of OLS Regression models.	• Continuous Assessments • Final Examination
CLO2 : Describe violations of classical assumptions and strategies to correct for these violations.	• Continuous Assessments • Final Examination
CLO3 : Collect, interpret, and organize economic and financial data.	• Continuous Assessments • Final Examination
CLO4 : Use econometric techniques, software, and theory to interpret and analyse decisions faced by economic agents and entities.	• Continuous Assessments • Final Examination
CLO5 : Combine economic theories and econometrics tools to design empirical research, particularly developing, estimating, and analysing least square regressions to study relations among economic variables.	• Continuous Assessments • Final Examination
CLO6 : Communicate statistical analysis, results, and interpretation in a succinct and clear manner.	• Continuous Assessments • Final Examination

Learning and Teaching Technologies

Moodle - Learning Management System | Zoom

Learning and Teaching in this course

The course focuses on learning fundamental principles of least squares analysis, the most commonly used methodology in econometrics. Understanding the concepts and developing econometrics intuition are very important to apply the knowledge to empirical research on financial markets. The course also covers the probability theory to help students build a rigorous foundation for learning econometrics. The course will deal with many examples of how least square analysis is used to study interesting issues in financial markets.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates	Program learning outcomes
Continuous Assessments Assessment Format: Individual	50%	Start Date: See Detailed assessment description Due Date: See Detailed assessment description	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO4 : Teamwork
Final Examination Assessment Format: Individual	50%	Start Date: See Detailed assessment description Due Date: See Detailed assessment description	• PLO1 : Business Knowledge • PLO3 : Business Communication • PLO2 : Problem Solving

Assessment Details

Continuous Assessments

Assessment Overview

Continuous assessments include in-class participation, written assignments, mid-term examination, case study, presentation, and group report.

Assesses:

PLO 1: Business knowledge,

PLO 2: Problem solving,

PLO 3: Business communication,

PLO 4: Teamwork

Course Learning Outcomes

- CLO1 : Explain the assumptions of OLS Regression models.

- CLO2 : Describe violations of classical assumptions and strategies to correct for these violations.
- CLO3 : Collect, interpret, and organize economic and financial data.
- CLO4 : Use econometric techniques, software, and theory to interpret and analyse decisions faced by economic agents and entities.
- CLO5 : Combine economic theories and econometrics tools to design empirical research, particularly developing, estimating, and analysing least square regressions to study relations among economic variables.
- CLO6 : Communicate statistical analysis, results, and interpretation in a succinct and clear manner.

Detailed Assessment Description

Weight	Assessment Name	Assessment Due Date / Timing
5%	Class Participation	On-going, weeks 1-10
5%	Written Assignments	7-8 assignments. See Moodle for exact due dates
40%	Mid-term Quiz (online)	Week 6 (provisional)

In-class Participation (5%): Students are expected to participate in weekly classes.

Written Assignments (5%): Problem sets will be assigned during the semester. They will account for 5% of the final grade. Students can work in groups, but each student must hand in their own written version of the work. Communication is important in any career, hence clarity of the written work will be valued. The howework will be due a week after they have been assigned.

Midterm Quiz (40%): The Midterm Quiz tests all the material covered in the lecture notes, the lecture, problem sets in weeks 1-5. It will contain long answer and short answer questions.

Submission notes

See Detailed assessment description

Assignment submission Turnitin type

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

Final Examination

Assessment Overview

The final examination tests material covered in the text, the lecture notes, the lecture, the group

assignments, and other assigned readings during weeks 1-10. It will be comprised of long answer and short answer questions.

Assesses:

PLO 2: Problem solving

Course Learning Outcomes

- CLO1 : Explain the assumptions of OLS Regression models.
- CLO2 : Describe violations of classical assumptions and strategies to correct for these violations.
- CLO3 : Collect, interpret, and organize economic and financial data.
- CLO4 : Use econometric techniques, software, and theory to interpret and analyse decisions faced by economic agents and entities.
- CLO5 : Combine economic theories and econometrics tools to design empirical research, particularly developing, estimating, and analysing least square regressions to study relations among economic variables.
- CLO6 : Communicate statistical analysis, results, and interpretation in a succinct and clear manner.

Detailed Assessment Description

Weight	Assessment Name	Assessment Due Date / Timing
50%	Final Examination	University Exam Period

Details: The final examination is comprehensive: It tests all the material covered the lecture notes, the lecture, problem sets, and assigned readings (if any) during weeks 1-10. It will contain long answer and short answer questions.

Due: Held during the UNSW Final Exam Period (date and location to be determined centrally)

Submission notes

See Detailed assessment description

Assignment submission Turnitin type

This is not a Turnitin assignment

General Assessment Information

Please note that the assessments in this course for 2024 T2 may be invigilated.

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.

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 : 27 May - 2 June	Lecture	Introduction to the Course and Financial Econometrics Revision: Statistics, Probability, Mathematics, etc.
Week 2 : 3 June - 9 June	Lecture	(continued) Revision: Statistics, Probability, Mathematics, etc. Intro to OLS Regressions
Week 3 : 10 June - 16 June	Lecture	OLS Regressions
Week 4 : 17 June - 23 June	Lecture	OLS Regressions (continued)
Week 5 : 24 June - 30 June	Lecture	Multivariate regressions Review for Midterm quiz
Week 6 : 1 July - 7 July	Assessment	Midterm Quiz
Week 7 : 8 July - 14 July	Lecture	Multivariate regressions (continued)
Week 8 : 15 July - 21 July	Lecture	Instrumental Variables
Week 9 : 22 July - 28 July	Lecture	Causal effects and Experiments
Week 10 : 29 July - 4 August	Lecture	Selected Topics (as time permits), e.g., -Panel Regressions -CAPM and Factor models -MVE portfolios Review for Final Exam

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 Moodle. The textbook for this course is:

- Introduction to Econometrics, 4th Edition, Stock and Watson, Pearson

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.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
Convenor	Suk Lee					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.