UNSW Course Outline

FINS5542 Applied Funds Management - 2024

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General Course Information

Course Code : FINS5542
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 a laboratory and theoretical based course that develops fundamental concepts of asset valuation in a world with time varying risk, in order to construct and manage an investment portfolio. The course focuses on the recent advances in quantitative finance including risk

modelling, forecasting, portfolio construction and evaluation. The aim is to provide students with a practitioner-orientated view of asset management where concern is based on generating superior returns. Topics focus primarily on empirical and practical tools required to actively manage an investment over time.

Course Aims

This subject provides an introduction to quantitative investment management with a strong emphasis upon computation. Modern quantitative techniques are employed that are used extensively in an applied context. Measuring, modelling and forecasting key financial parameters are essential elements in the delivery of the course, which are important for successful management of investment portfolios, including equity and hedge fund portfolios. Students are expected to develop their quantitative skills using modern statistical software such as Ox and STATA. The course builds on the finance concepts learnt in introductory investments with stronger emphasis on computing.

Relationship to Other Courses

This subject provides an introduction to quantitative investment management with a strong emphasis upon computation. Modern quantitative techniques are employed that are used extensively in an applied context. Measuring, modelling and forecasting key financial parameters are essential elements in the delivery of the course, which are important for successful management of investment portfolios, including equity and hedge fund portfolios. Students are expected to develop their quantitative skills using modern statistical software such as Ox and STATA. The course builds on the finance concepts learnt in introductory investments with stronger emphasis on computing. FINS5513 or equivalent is the pre- or co- requisite.

Course Learning Outcomes

Course Learning Outcomes	Program learning outcomes
CLO1 : Explain standard approaches to quantitative analysis in investments.	• PLO1 : Business Knowledge • PLO3 : Business Communication
CLO2 : Use quantitative methods in investment with computing skills in matrix programming and statistical software.	• PLO2 : Problem Solving
CLO3 : Evaluate methods of quantitative analysis.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication
CLO4 : Construct written work in time varying risk and portfolio management which is logically and professionally presented.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication
CLO5 : Communicate time varying risk and portfolio management ideas in a succinct and clear manner.	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication
CLO6 : Work collaboratively to complete a group assignment.	• PLO2 : Problem Solving • PLO3 : Business Communication • PLO4 : Teamwork

Course Learning Outcomes	Assessment Item
CLO1 : Explain standard approaches to quantitative analysis in investments.	• Individual Assignment 1 • Individual Assignment 2 • Group Assignment
CLO2 : Use quantitative methods in investment with computing skills in matrix programming and statistical software.	• Individual Assignment 1 • Individual Assignment 2 • Group Assignment
CLO3 : Evaluate methods of quantitative analysis.	• Individual Assignment 1 • Individual Assignment 2 • Group Assignment
CLO4 : Construct written work in time varying risk and portfolio management which is logically and professionally presented.	• Individual Assignment 1 • Individual Assignment 2 • Group Assignment
CLO5 : Communicate time varying risk and portfolio management ideas in a succinct and clear manner.	• Individual Assignment 1 • Individual Assignment 2 • Group Assignment
CLO6 : Work collaboratively to complete a group assignment.	• Group Assignment

Learning and Teaching Technologies

Moodle - Learning Management System | Blackboard Collaborate

Learning and Teaching in this course

This course introduces quantitative methods used in applied portfolio management through written course materials, online lectures, that are recorded, workshops, and other learning activities to be completed on your computer. The course materials can be accessed through the courses Moodle site.

Other Professional Outcomes

Students will also gain knowledge of different styles of investment portfolios.

Additional Course Information

None

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates	Program learning outcomes
Individual Assignment 1 Assessment Format: Individual	35%	Start Date: See detailed assessment description Due Date: 06/10/2023 11:00 PM	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication
Individual Assignment 2 Assessment Format: Individual	35%	Start Date: See detailed assessment description Due Date: 27/10/2023 11:00 PM	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication
Group Assignment Assessment Format: Group	30%	Start Date: See detailed assessment description Due Date: 21/11/2023 11:00 PM	• PLO1 : Business Knowledge • PLO2 : Problem Solving • PLO3 : Business Communication • PLO4 : Teamwork

Assessment Details

Individual Assignment 1

Assessment Overview

This assignment is on technical analysis with the matrix programming language Ox and includes written analysis of results.

Assesses: PLO1, PLO2, PLO3

Course Learning Outcomes

- CLO1 : Explain standard approaches to quantitative analysis in investments.
- CLO2 : Use quantitative methods in investment with computing skills in matrix programming and statistical software.
- CLO3 : Evaluate methods of quantitative analysis.
- CLO4 : Construct written work in time varying risk and portfolio management which is logically and professionally presented.
- CLO5 : Communicate time varying risk and portfolio management ideas in a succinct and clear manner.

Detailed Assessment Description

This assessment will be released in week 2 and will be primarily focused on material covered in weeks 1 and 2 lectures. Aspects of technical analysis will be assessed in addition to the use of the matrix programming language, Ox.The assignment submission will be as a pdf file to be uploaded through the course website.

Submission notes

See detailed assessment description

Assignment submission Turnitin type

Not Applicable

Individual Assignment 2

Assessment Overview

This assignment continues with Ox programming and covers material up to and including Value-at-Risk methods, with critical evaluation of various methods.

Assesses: PLO1, PLO2, PLO3

Course Learning Outcomes

- CLO1 : Explain standard approaches to quantitative analysis in investments.
- CLO2 : Use quantitative methods in investment with computing skills in matrix programming and statistical software.
- CLO3 : Evaluate methods of quantitative analysis.
- CLO4 : Construct written work in time varying risk and portfolio management which is logically and professionally presented.
- CLO5 : Communicate time varying risk and portfolio management ideas in a succinct and clear manner.

Detailed Assessment Description

This assessment will be released in week 4 and will be focused on material covered in lectures

up to week 5. Value-at-Risks methods, including estimation with the matrix programming language, Ox, and evaluation of different methods, will be central to this assessment. The assignment submission will be as a pdf file to be uploaded through the course website.

Submission notes

See detailed assessment description

Assignment submission Turnitin type

Not Applicable

Group Assignment

Assessment Overview

This is a group assignment covering multi-factor models estimated with the statistical software, Stata and volatility and beta estimation, including individual presentations.

Assesses: PLO1, PLO2, PLO3, PLO4, PLO7

Course Learning Outcomes

- CLO1 : Explain standard approaches to quantitative analysis in investments.
- CLO2 : Use quantitative methods in investment with computing skills in matrix programming and statistical software.
- CLO3 : Evaluate methods of quantitative analysis.
- CLO4 : Construct written work in time varying risk and portfolio management which is logically and professionally presented.
- CLO5 : Communicate time varying risk and portfolio management ideas in a succinct and clear manner.
- CLO6 : Work collaboratively to complete a group assignment.

Detailed Assessment Description

This assessment will be released in week 7 and will be primarily focused on material covered in lectures up to week 8. This group assignment will involve working in groups of 5 to estimate multi-factor models to explain investment returns and also volatility and beta estimation. Statistical work will involve the use of the statistical softwate, Stata. The assignment submission will be as a pdf file to be uploaded through the course website. This assignment also involves an individual presentation.

Submission notes

See detailed assessment description

Assignment submission Turnitin type

Not Applicable

General Assessment Information

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 matrix programming with Ox.
Week 2 : 3 June - 9 June	Lecture	Technical Analysis, Including Moving Average Rules and Relative Strength Indexes
Week 3 : 10 June - 16 June	Lecture	Value-at-Risk, Analytical and Simulation Methods, Including Back-Testing and Performance Evaluation
Week 4 : 17 June - 23 June	Lecture	Value-at-Risk, Analytical and Simulation Methods, Including Back-Testing and Performance Evaluation Assignment 1 due.
Week 5 : 24 June - 30 June	Lecture	Review of Basic Statistics and Regression Analysis, Including Hypothesis Testing, and Introduction to the Statistical Package: Stata
Week 6 : 1 July - 7 July	Lecture	Multi-Factor Models and Construction of Factor Portfolios
Week 7 : 8 July - 14 July	Lecture	Time Series Models, Including AR, MA and ARIMA Assignment 2 due
Week 8 : 15 July - 21 July	Lecture	Measuring, Modeling and Forecasting of Beta (Systematic Risk) and Volatility Risk, Including Realized Beta Estimators and Realized Volatility Estimators
Week 9 : 22 July - 28 July	Presentation	Asset risk premia
Week 10 : 29 July - 4 August	Presentation	Asset risk premia

Attendance Requirements

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

General Schedule Information

Your regular attendance and active engagement in all scheduled classes and online learning activities is expected in this course. Failure to attend / engage in assessment tasks that are

integrated into learning activities (e.g. class discussion, presentations) will be reflected in the marks for these assessable activities. The Business School may refuse final assessment to those students who attend less than 80% of scheduled classes where attendance and participation is required as part of the learning process (e.g. tutorials, flipped classroom sessions, seminars, labs, etc.). If you are not able to regularly attend classes, you should consult the relevant Course Authority.

Course Resources

Prescribed Resources

Course materials will be provided on Moodle, including course notes, online lectures and other learning activities.

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	Jonathan Reeves		Business School Room 369	(02) 9385-5874	Please email for an 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.