

## **FINS 2624 Portfolio Management**

### **Course Outline Semester 2, 2017**

#### **Course-Specific Information**

The Business School expects that you are familiar with the contents of this course outline. You must also be familiar with the School's Course Outlines Policies webpage which contains key information on:

- Program Learning Goals and Outcomes
- Academic Integrity and Plagiarism
- Student Responsibilities and Conduct
- Special Consideration
- Student Support and Resources

This webpage can be found on the Business School website:

<https://www.business.unsw.edu.au/degrees-courses/course-outlines/policies>

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# COURSE-SPECIFIC INFORMATION

## 1 STAFF CONTACT DETAILS

Lecturer-in-charge: Jianfeng Shen

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Email: [Jianfeng.shen@unsw.edu.au](mailto:Jianfeng.shen@unsw.edu.au)

Consultation Times (weeks 2 – 12 only): 3-4pm, Tuesdays.

The location for consultation is my office. Please use the intercom located in front of the entrance to School of Banking and Finance to get in.

If you have questions outside the lecture and consultation hours, please raise them in the relevant Moodle forum. You can also email/call me or request an appointment for questions/issues involving privacy.

A full list of tutors will be posted on Course Website.

## 2 COURSE DETAILS

### 2.1 Teaching Times and Locations

Lectures start in Week 1(to Week 12): The Time and Location are:

Section A	Tuesday	11:00	13:00	Law Theatre G04
Section B	Friday	10:00	12:00	Law Theatre G04
Section C	Tuesday	18:00	20:00	Law Theatre G04

Tutorials start in Week 2 (to Week 13). A full list of tutorials, times and tutors will be on the Course Website.

### 2.2 Units of Credit

The course is worth 6 units of credit.

### 2.3 Summary of Course

Investment theories are introduced with an equal emphasis on theory and practice. The Markowitz model and the CAPM are studied and applied to design portfolios, price and manage risk, evaluate performance, identify mispriced assets, and estimate asset betas. The pricing of stocks, bonds, and options; the theories of the term structure; the duration concept; and the strategic use of options for hedging and investment are also studied.

### 2.4 Course Aims and Relationship to Other Courses

This course will introduce you to the concept of diversification, which is a key element in portfolio design. We'll study and apply the Markowitz portfolio theory, CAPM, and efficient market hypothesis to design portfolios, to identify under- and over-valued securities, to measure price and manage risk and to evaluate investment performance. We'll discuss the pricing of bonds and stock option. You'll learn how to manage a bond portfolio and formulate option trading strategies to improve investment performance.

Portfolio Management is one of four core courses in finance. This course extends and applies knowledge in financial mathematics acquired from FINS1613 and/or ECON

1202 to price stocks, bonds and stock options; portfolio theory from FINS1613 to rank and select portfolios; linear programming and calculus from ECON 1202 to determine the composition and attributes of a portfolio; frequency distribution, measures of central tendency, mean and dispersion, the normal distribution, point estimation of population parameters and confidence intervals from ECON 1203 to understand investment risk, expected return and the Black-Scholes option pricing model; hypothesis testing, t-distributions, and bivariate regression from ECON1203 to study the CAPM.

This course also covers the assumed knowledge required by finance courses in the area of fund management: FINS3640 and FINS3641; real estate finance: FINS3633; risk management: FINS3631, FINS3635 and FINS3636; and honours program: FINS3775.

## 2.5 Student Learning Outcomes

The Course Learning Outcomes are what you should be able to DO by the end of this course if you participate fully in learning activities and successfully complete the assessment items.

The Learning Outcomes in this course also help you to achieve some of the overall Program Learning Goals and Outcomes for all undergraduate students in the Business School. Program Learning Goals are what we want you to BE or HAVE by the time you successfully complete your degree (e.g. 'be an effective team player'). You demonstrate this by achieving specific Program Learning Outcomes - what you are able to DO by the end of your degree (e.g. 'participate collaboratively and responsibly in teams'). For more information on Program Learning Goals and Outcomes, see the School's Course Outlines Policies webpage available at <https://www.business.unsw.edu.au/degrees-courses/course-outlines/policies>

The following table shows how your Course Learning Outcomes relate to the overall Program Learning Goals and Outcomes, and indicates where these are assessed (they may also be developed in tutorials and other activities):

Program Learning Goals and Outcomes		Course Learning Outcomes	Course Assessment Item
<i>This course helps you to achieve the following learning goals for all Business undergraduate students:</i>		<i>On successful completion of the course, you should be able to:</i>	<i>This learning outcome will be assessed in the following items:</i>
1	Knowledge	1. Apply the empirical findings on the efficient market hypothesis to design investment strategies.  2. Apply the portfolio theory to rank and select portfolios; the CAPM to measure and price risk, explain the popularity of index funds, separate market risk from firm-specific risk, and identify mispriced securities; the theories of the term structure and the concept of duration to explain the choice of bonds.	<ul style="list-style-type: none"> <li>• Tutorial problems</li> <li>• In-class exams</li> <li>• Final exam</li> </ul>
2	Critical thinking and problem solving	3. Identify violations of a no-arbitrage equilibrium and outline a trading strategy to exploit it.	<ul style="list-style-type: none"> <li>• Tutorial problems</li> <li>• In-class exams</li> <li>• Final exam</li> </ul>

		4. Apply option strategies to achieve a risk-return profile to suit some given market condition.	
3a	Written communication	Not specifically addressed in this course.	Part of tutorial problems, in-class exams and final exam, but not specifically assessed.
3b	Oral communication	Not specifically addressed in this course.	Part of tutorial problems, but not specifically assessed.
4	Teamwork	5. Work collaboratively to complete a task. 6. Explain your solution to other team members.	Part of tutorial problems, but not specifically assessed.
5a.	Ethical, social and environmental responsibility	7. Understand and internalise ethical consideration relating to the reporting, evaluation and sales of mutual funds and investment advice.	Part of tutorial problems, in-class exams and final exam, but not specifically assessed.
5b.	Social and cultural awareness	Not specifically addressed in this course.	Not specifically assessed.

### 3 LEARNING AND TEACHING ACTIVITIES

#### 3.1 Approach to Learning and Teaching in the Course

The philosophy underpinning this course is best summarized by the following list of guidelines extracted from Guidelines on Learning that inform teaching at UNSW:

[www.guidelinesonlearning.unsw.edu.au/](http://www.guidelinesonlearning.unsw.edu.au/)

1. Effective learning is supported when students are actively engaged in the learning process.
6. Students become more engaged in the learning process if they can see the relevance of their studies to professional, disciplinary and/or personal contexts.
10. Clearly articulated expectations, goals, learning outcomes, and course requirements increase student motivation and improve learning.
15. Effective learning is facilitated by assessment practices and other student learning activities that are designed to support the achievement of desired learning outcomes.
16. Meaningful and timely feedback to students improves learning

We believe that a disciplined approach to learning is important for effective learning. Students should engage in the learning process through regular class attendance, and regular staff or peer consultation to resolve any learning issues.

We also believe that a well-organized and structured course is important for effective learning and teaching. Besides designing a coherent lecture and tutorial program to present and discuss the syllabus, we'll

- use actual examples and research findings in lectures to demonstrate the relevance of the subject to the finance profession and

- give students a variety of questions to practice and apply concepts.

The teaching strategies and assessments that we formulate below are due entirely to the learning outcomes and philosophy underpinning this course.

### 3.2 Learning Activities and Teaching Strategies

In **lectures**, we introduce you to investment theories and securities pricing. Whenever a finance theory is discussed we give it a thorough theoretical motivation, explain its merits and applications, and use practical examples to relate the theory to the real world. We believe that this logical sequence of discussion can help you assimilate knowledge due to understanding rather than memorization.

To gain deeper understanding of the materials taught, you need to revise the lesson soon after each lecture by studying the lecture slides, the notes you took in class, and the prescribed readings. In addition to the **face to face mode of consultation** with the lecturers, we will open a **discussion forum** for students to post questions and seek peer assistance. By sharing the questions and responses in the forum, the discussion forum should benefit the whole class and is the preferred mode of electronic communication. If you email individual instructors questions about the course, you are likely to be asked to post it in the discussion forum instead, so please try to post your question there directly.

The **tutorial and problem sets and extra exercises** are used to help you improve your critical thinking and problem solving skills, and to prepare you for the assignment and examination.

Learning will not be completed without feedback.

- The **problem sets** will be discussed formally in tutorials. We value and will reward your active participation to ask and answer questions. The tutor will correct any misunderstandings and help you understand the approach we use to solve the problem.
- For the **extra exercises** the answers are available from a separately sold solutions manual.
- The tutors will monitor and participate in the **discussion forum** during their consultation times to complement the peer assistance.

## 4 ASSESSMENT

### 4.1 Formal Requirements

In order to pass this course, you must:

- achieve a composite mark of at least 50;
- make a satisfactory attempt at all assessment tasks

### 4.2 Assessment Details

Assessment Task	Weighting	Length	Due Date
Tutorial problems	10	N/A	Weekly as per tutorial enrolment
In-class Exam1	15	45mins	Week 5, by August 26
In-class Exam2	25	75mins	Week 12, by October 21
Final Exam	50	2 hours	UNSW Final exam period
Total	100		

## Tutorial participation

Students must go to their enrolled tutorial classes (as per myUNSW) for attendance keeping. Students are expected to be prepared for the tutorials, participate actively in tutorial discussion, and show respect to their classmates and the tutor by **arriving on time, paying attention, and staying for the entire duration of the tutorial**. Students are required to complete at least 10 out of the total 11 problem sets (i.e., anyone could choose to skip one problem set). 10 marks, i.e. 1 per problem set, are allocated to the tutorials on the basis of participation and preparation. Students can choose to attend and attempt more than 10 tutorials, and all attempted tutorials will be graded, but the total tutorial participation mark will be capped at 10.

Specifically, to get the full credit 1 mark for each tutorial, the student must: 1) attend the tutorial; AND 2) honestly attempt the problem set and turn in suggested solutions (hard copy) for the problem set in that tutorial. The solutions need not be correct, but they need to constitute an honest attempt. A student will get zero mark for a tutorial if he/she does not meet ANY of the two criteria above.

Special consideration: If a student is unable to sit in a tutorial in the designated tutorial class with justifiable reasons, he/she should contact **the tutor before or on** the date of tutorial class to seek the permission to sit in another tutorial class offered by the same tutor in the same week. The student should provide relevant medical certificate or other proof documents. The tutor should evaluate each application and decide case by case whether to allow the student to sit in another tutorial class. Under very special and justifiable cases where attending an alternative class is impossible, the attendance could be waived but the student is still required to email the tutor the scanned copy of his/her solution by the end of the week. **The tutor has the full discretion in his/her decision.**

## In-class exams

There will be two in-class exams administered via Moodle during lectures in weeks 5 and 12. The first exam will carry a weight of 15% and cover lectures 1 to 3, and the second one will carry a weight of 25% and cover lectures 4 to 9. The format of the exams will be clarified in due time. **It is compulsory to attend the two lectures and bring an electronic device with access to Moodle, to participate in the exam.**

Special consideration: Applications for special consideration must be **lodged online through myUNSW**. Please follow the link provided on the first page of this course outline about the application procedure and policies. Applications for special consideration in relation to the in-class exams will be considered by the lecturer-in-charge. If a special consideration is granted for a student, his/her exam mark will be calculated at the end of the semester proportionately to his/her total mark on all other assessments in the course.

## Final exam

The final exam will cover all the materials discussed in the lectures from week 1 to week 12. We will not specify the questions in advance. You must observe the exam rules and regulations set by the university. The format of the final exam will be specified in due time.

Special consideration: Applications for special consideration must be **lodged online through myUNSW**. Please follow the link provided on the first page of this course outline about the application procedure and policies. Applications for special consideration in relation to the final exam will be considered by a Business School Faculty panel to which lecturers-in-charge provide their recommendations for each request. If the Faculty panel grants a special consideration request, this will entitle the

student to sit a supplementary examination. No other form of consideration will be granted.

### 4.3 Late Submission and Penalties

For the problem set solutions, late submissions will not be accepted.

#### 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.

## 5 COURSE RESOURCES

The website for this course is on Moodle at:

<http://moodle.telt.unsw.edu.au>

Students are expected to log in to the course website regularly to download course materials, read course announcements, and participate in the discussion board.

There are two alternative textbooks for the course. Student may choose **either** of the following:

- Bodie, Z., A. Kane and A. Marcus, 2013, *Investments*, 10th edition, Irwin McGraw-Hill
- The **custom version** of Bodie et al (2014) called **FINS2624 - Portfolio Management**, prepared by Shen Jianfeng

The difference between these books is that the former is the full, standard textbook and the latter contains only the chapters from that book that are used in this course. The advantage of the full book is that students may find it useful (and required) in other courses. The advantage of the latter book is that it is cheaper. We recommend students that mean to major in finance to buy the full textbook and students that do not intend to take further finance courses to buy the custom version. For the purpose of this course there is no difference between the two. There are older editions of the textbooks. These do not exactly correspond to the books we're using. However, the differences between editions are typically small. There are references for both the 9<sup>th</sup> and 10<sup>th</sup> editions where they differ in the essential readings and recommended extra exercises, so students that wish to use the 9<sup>th</sup> edition can safely do so.

If you are planning to do revision questions in Bodie et al and would like to check your answers the following book is helpful:

- *Student Solutions Manual for Investments (10<sup>th</sup> edition)*, McGraw-Hill (optional)

## 6 COURSE EVALUATION AND DEVELOPMENT

Each year feedback is sought from students and other stakeholders about the courses offered in the School and continual improvements are made based on this feedback. UNSW's myExperience survey is one of the ways in which student evaluative feedback is gathered. In this course, we will seek your feedback through end of semester myExperience responses, individual discussions, and tutors. Feedback from previous students indicated that it is important to specify assessment items and the grading rules



in the course outline. As a result of this feedback, we have tried best to give as much detail on assessments in the course outline.

## 7 COURSE SCHEDULE

Tutorials start in Week 2 and finish in Week 12.

Lectures start in Week 1 and finish in Week 12.

COURSE SCHEDULE				
Week	Lecture Topic	Recommended readings	Tutorial Topic	Extra exercises (subject to changes)
Week 1 24 July	Introduction to bond pricing	Course outline, BKM 14 (14.2-14.3)	<i>NO TUTORIALS</i>	
Week 2 31 July	Term structure of interest rates	BKM 15 (all sections)	Introduction to bond pricing (problem set 1)	BKM 14: 3-5, 8, 9, 13, 16, 17, 23, 31a
Week 3 7 August	Duration	BKM 16 (16.1 - 16.3)	Term structure of interest rates (problem set 2)	BKM15: 1-3, 7, 11, 13, 14, 18, 19
Week 4 14 August	<b>In-class Exam1</b> Markowitz portfolio theory	BKM6 (6.1), BKM7 (7.1 - 7.2, 7.4, Appendix B)	Duration (problem set 3)	BKM16: 1-4, 9, 12, 14, 15, 23
Week 5 21 August	Optimal portfolios	BKM6 (6.2 - 6.6), BKM7 (7.3 - 7.4)	Markowitz portfolio theory (problem set 4)	BKM 6: 4, 6, 7, 13
Week 6 28 August	CAPM	BKM 8 (8.1 - 8.4), BKM 9 (9.1)	Optimal portfolios (problem set 5)	BKM6: 1-3, 21, 27, 28 + BKM 7: 9, 12, 13, 16
Week 7 4 September	SIM and Factor models	BKM 8 (8.1-8.4), BKM 10 (all sections)	CAPM (problem set 6)	BKM9: 1-4, 9, 17-21
Week 8 11 September	Efficient market hypothesis and behavioural finance	BKM 11 (11.1-11.5), BKM 12 (12.1-12.2)	SIM and Factor models (problem set 7)	BKM8:8,9,10,11,12 BKM10:1,4,5,11,19
Week 9 18 September	Performance measures	BKM 24 (24.1-24.3)	Efficient market hypothesis and behavioural finance (problem set 8)	BKM11: 1, 14, 17, 18, 22, 29 + BKM12: 3, 6, 9-12
Mid-semester break: 23 September – 2 October inclusive (2 Oct = Labour Day Public Holiday)				
Week 10 3 October	Option strategies	BKM 20 (20.1-20.4)	Performance measures (problem set 9)	BKM24: 7[a,b], 8-11, 16, 21
Week 11 9 October	Option valuation	BKM 21 (21.1, 21.3)	Option strategies (problem set 10)	BKM20: 1, 3, 4, 8, 10, 13, 20, 24, 27
Week 12 16 October	<b>In-class Exam2</b> Revision and Q&A		Option valuation (problem set 11)	BKM21 : 1, 2, 5, 6, 11, 14, 16, 17, 19-21, 23, 25