UNSW Business School

School of Economics

ECON3107 / ECON5106
Economics of Finance

Course Outline
Semester 1, 2017

Part A: Course-Specific Information

Students are also expected to have read and be familiar with **Part B Supplement to All Undergraduate Course Outlines**. This contains Policies on Student Responsibilities and Support, Including Special Consideration, Academic Misconduct and Plagiarism, and Key Dates. It also contains the BUSINESS SCHOOL PROGRAM LEARNING GOALS.

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1 STAFF CONTACT DETAILS

Lecturer-in-charge: Mariano Kulish
Room 467, UNSW Business School Building
Phone No: 9385 3670
Email: m.kulish@unsw.edu.au (read 1.1 below before emailing)
Consultation Times: 14:30-16:00 or by appointment.

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

1.1 Communication with staff

You should feel free to contact your lecturer about any academic matter. However, I strongly encourage, for efficiency, all enquiries about the subject material be made at lectures or tutorials or during consultation times.

I will reply to emails within 3 working days with the following provisions:

- The question should require at most a two-sentence response. If it takes more, office hours are the more appropriate venue.
- The email should not request information that can be found on the website or this syllabus.
- The email is not about grading. For such matters, office hours are appropriate.
- It is also (strongly) preferable that you use an UNSW email address: the spam filter is set to maximum. Moreover, university policy stipulates a preference for these email addresses.
- Always identify yourself and the course code in the subject of your email.
- Please do not send attachments of any kind unless requested.

Please do not submit term work by email unless requested by the lecturers.

If you have a question regarding tutorials, please, contact your tutor. Email your tutor if you wish to arrange a consultation.

2 COURSE DETAILS

2.1 Teaching Times and Locations

Lectures start in Week 1(to Week 12): The Time and Location are:
Thursday 12:00 – 14:00 Physics Theatre

Tutorials start in Week 2 (to Week 13). A full list of tutorials, times and tutors will be on the Course Website. See http://www.timetable.unsw.edu.au/current/ECON3107.html .

2.2 Units of Credit

The course is worth 6 units of credit.
This course is taught in parallel to both undergraduate and postgraduate students.

2.3 Summary of Course

The valuation formulas used throughout the modern financial world are based on the economic theory of financial markets and general equilibrium. This course provides a treatment of the economic foundations of modern finance. We start with a discussion of

how economic agents (should) make decisions when the economic environment is uncertain. Then, asset-pricing models are introduced, and we discuss how economic uncertainty can be dealt with using state-contingent securities, which in turn lead to efficient market outcomes when markets are complete. Further topics include option pricing, determination of firms' value and its relation to a firm's capital structure, and the theory of efficient portfolios. The tools and knowledge that students acquire in this course are particularly useful and sought after in the public and private finance sector.

2.4 Relationship to Other Courses

This course is offered as part of the financial economics major in the Bachelors of Commerce and Economics and several streams in the Master of Commerce. Because ECON2101 (Microeconomics II) provides an introduction to neoclassical economic analysis, for undergraduate students it is a natural prerequisite for ECON3107.

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 coursework 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. You demonstrate this by achieving specific Program Learning Outcomes - what you are able to DO by the end of your degree.

For more information on the Undergraduate Program Learning Goals and Outcomes, see Part B of the course outline.

The following table shows how your Course Learning Outcomes relate to the overall Program Learning Goals and Outcomes, and indicates where these are assessed:

Program Learning Goals and Outcomes		**Course Learning Outcomes**	**Course Assessment Item**
This course helps you to achieve the following learning goals		*On successful completion of the course, you should be able to:*	*This learning outcome will be assessed in the following items:*
1	Knowledge	Explain standard asset pricing models, their underlying assumptions, and their usefulness in financial decision making. Explain the principles underlying the pricing of new financial assets whose payoffs are contingent on certain outcomes. Apply programming tools such as MATLAB to real world derivative pricing..	• Assignments (AOL) • Exams (AOL)

2	Critical thinking and problem solving	Assess the factors that should be brought to bear to assess the value (or price) of a newly introduced asset whose payoffs are contingent on certain outcomes Apply some of the general principles of asset pricing for evaluation of contingent contracts. Apply the principles that lead to the efficient formation of portfolios of stocks.	• Assignments (AOL) • Exams (AOL)
3a	Written communication	Construct written work which is logically and professionally presented.	• Assignments (AOL) • Exams (AOL)
3b	Oral communication	Communicate ideas in a succinct and clear manner.	• Video Assignment (AOL)
4	Teamwork	Work collaboratively to complete a task.	Not specifically assessed.
5a.	Ethical, environmental and sustainability considerations	Identify ethical issues in financial markets.	Not specifically assessed.
5b.	Social and cultural awareness	Not specifically addressed in this course.	• Assignments (AOL) • Exams (AOL)

The course assessments indicated with (AOL) are used to assess the Program Learning Goals and Outcomes according to the Assurance of Learning (AOL) processes of the UNSW Business School. At least some components of the AOL assessments will be marked according to the AOL rubric for the assessment criteria. The AOL rubric relevant for your course will be posted on the course Moodle site.

3 LEARNING AND TEACHING ACTIVITIES

3.1 Approach to Learning and Teaching in the Course

The philosophy underpinning this course and its Teaching and Learning Strategies are based on "Guidelines on Learning that Inform Teaching at UNSW. These guidelines may be viewed at: www.guidelinesonlearning.unsw.edu.au. Specifically, the lectures, tutorials and assessment 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 (in and out of class). The lecturers and tutors aim to provide meaningful and timely feedback to students to improve learning outcome.

3.2 Learning Activities and Teaching Strategies

The examinable content of the course is defined by the material covered in lectures, tutorials and problem sets.

Lectures

The purpose of lectures is to provide a logical structure for the topics that make up the course, to emphasise the important concepts and methods of each topic, and to provide relevant examples to which the concepts and methods are applied. As not all topics will be presented extensively, students should refer to the textbook for further details and be sure to attempt the tutorial exercises.

Tutorials
The object of the tutorials is to discuss various approaches to, and issues associated with the assigned exercises and topics covered in the course. Tutorial will also be used to administer short tests throughout the session. These tests will contribute to monitoring student progress as well as provide students with feedback on their learning.

Out-of-Class Study
While students may have preferred individual learning strategies, it is important to note that most learning will be achieved outside of class time. Lectures can only provide a structure to assist your study, and tutorial time is limited.

An "ideal" strategy (on which the provision of the course materials is based) might include:

- Reading of the relevant chapter(s) of the text and any readings **before the lecture.** This will give you a general idea of the topic area.
- Attendance at lectures. Here the context of the topic in the course and the important elements of the topic are identified. The relevance of the topic should be explained.
- Attending tutorials and attempting the tutorial questions.

4 ASSESSMENT

4.1 Formal Requirements

In order to pass this course, you must:

- achieve a composite mark of at least 50 out of a maximum of 100; and
- make a satisfactory attempt at ALL assessment tasks (see below).

4.2 Assessment Details

Assessment Task	Weighting	Length	Due Date
Assignments (2)	15%	Section 4.4	See section 4.4
Midsession Exam	25%	60 minutes	Week 8
Final Exam	60%	120 minutes	University Exam Period
Total	100%		

4.3 Midsession Exam

A mid-session exam will be held during the lecture of WEEK 8, on Thursday, 27 April 2017. It will be of one hour in duration and will relate to the topics covered during the first six weeks of lectures. The purpose of the assessment is to test knowledge of the concepts introduced up to this point.

There will be **no supplementary tests** offered for the mid-session exam. You should make every effort to take the mid-session exam. For students who do not attend the midsession exam, or those students who receive a higher mark for the final exam than the midsession, the final exam will have a weight of 85%.

4.4 Tutorial Assignment Submission Procedure

There will be 2 assignments, Assignment 1 (10%) and a Video Assignment (5%). During the session, you will be asked to submit your answers to the assigned exercises. You will be given: i) at least one week's notice before the assignments are handed out; ii) two weeks to complete and hand-in your assignments. The hard copy is to be submitted to an Assignment Box (to be announced), located on the ground floor of the Business School Building. Do not use plastic sheets or binders. Simply staple the pages together. Your name and ID should be on the cover page.
The *Video Presentation* worth 5% is aimed to help you develop your oral presentation skills. Detailed instructions will follow with respect to the way in which the video is to be uploaded.

4.5 Late Submission

Late submissions will not be marked. *'Special consideration' does not apply* to late submission of assignments. As each assignment is worth less than 20%, special consideration does not apply.

4.6 Random In-class Quizzes

Randomly, short in-class quizzes on the material recently covered will be given during lectures. Paying attention in class is enough to answer them successfully. You can earn an **extra 3%** to your final mark by successfully completing these quizzes. There are no penalties for not attempting the quizzes as you can still earn a 100% mark for the course without attempting any quizzes.

4.7 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 and will not be related to course grades.

5 COURSE RESOURCES

The website for this course is on UNSW Moodle at: http://moodle.telt.unsw.edu.au

The prescribed text for the course is:

- William F. Sharpe, "*Macro-Investment Analysis*", Stanford University, manuscript.

This book has not yet been published in a hard copy. It can be downloaded free of charge from William Sharpe's website at:
http://www.stanford.edu/~wfsharpe/mia/mia.htm

And some chapters from the following textbook will also be used.

- J.P. Danthine and J.B. Donaldson, "Intermediate Financial Theory", Third Edition, Academic Press, Elsevier. http://www.sciencedirect.com/science/book/9780123865496

Other suggested readings include:

- Sigmon, Kermit (1992) "*MATLAB Primer*", Second Edition, Department of Mathematics, University of Florida.
  (This is the reference for a crash course on programming using MATLAB. The manuscript will be available for download from the course website)

Suggested additional readings include:

- Ken Nyholm, "Strategic Asset Allocation in Fixed Income Markets : A Matlab Based User's Guide", Wiley Finance
- Sharpe, William F., "Nuclear Financial Economics" in William H. Beaver and George Parker, eds., "*Risk Management: Problems & Solutions*", McGraw-Hill, 1995, pp. 17-35.
  (This is a nice survey article on the pricing of contingent claims that summarizes many of the ideas in the first couple of chapters of the course textbook. The manuscript can be downloaded from William Sharpe's website at http://www.stanford.edu/~wfsharpe/art/RP1275.pdf)

Additional materials such as solutions to the tutorial exercises, MATLAB codes, MATLAB tutorials etc. will be provided on UNSW Moodle.

The software for the course is MATLAB. This software is installed in the Quad Labs.

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 Tool is one of the ways in which student evaluative feedback is gathered. You are strongly encouraged to take part in the feedback process.

7 COURSE SCHEDULE

7.1 Lecture Schedule

Lectures start in Week 1 and finish in Week 12. A tentative lecture schedule follows.

LECTURE SCHEDULE		
Week	Topic	Reference
Week 1 27 February	**Matrices and programming**; Matrix Operations; Asset Allocation; **Prices I**; Time-State Claims	Sharpe text, Ch. 2 and 3
Week 2 6 March	**Prices II**: Valuation; Multiple Commodities, States and Times	Sharpe text, Ch. 3
Week 3 13 March	**Prices III**: Valuation; Multiple Commodities, States and Times (contd.)	Sharpe text, Ch. 3
Week 4 20 March	**Prices IV**: Multiple commodities, states and times (contd.); Interest rate & bond yields; Forward prices	Sharpe text, Ch. 3
Week 5 27 March	**Probabilities I** Topics: Production, Consumption and Market Clearing; Binomial Option Pricing;	Sharpe text, Ch. 4;
Week 6 03 April	**Probabilities II** Topics: Production, Consumption and Market Clearing (contd.)	Sharpe text, Ch. 4
Week 7 10 April	**Probabilities III** Topics: Risk Premia; Consumption and Investment Choices	Sharpe text, Ch. 4; Lecture Notes
Mid-semester break: Friday 14 – Saturday 22 April inclusive		
Week 8 24 April	**Midsession Exam**	
Week 9 1 May	**Arrow-Debreu Pricing** Topics: Competitive Equilibrium, Pareto Optimality and Risk Sharing	Danthine and Donaldson, Ch. 9
Week 10 8 May	**Arrow-Debreu Pricing II** Topics: Implementing Allocations, Risk Neutral Valuations	Sharpe text, Ch. 5
Week 11 15 May	**Risk and Return III** Topics: Portfolio Choice; Portfolio Characteristics. Two-asset Portfolios	Sharpe text, Ch. 5
Week 12 22 May	**Risk and Return (cont'd) +** **Review and extensions**	
Week 13 29 May	NO LECTURES	