FINM7041
Applied Derivatives

This unit is designed to further students' understanding of futures and options contracts and their use in managing risk. It builds upon material covered in FINM1001/FINM7006 (Foundations of Finance) and STAT7055 (Financial Statistics). FINM7041 provides an overview of options, futures, forwards and swaps on a range of underlying assets/commodities including stocks, interest rates, foreign exchange as well as more exotic instruments. The models used for pricing these instruments will be examined as well as techniques used for risk management.

<table>
<thead>
<tr>
<th>Mode of Delivery</th>
<th>On Campus</th>
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<tbody>
<tr>
<td>Prerequisites</td>
<td>STAT7055, FINM7006 and BUSN7008</td>
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<tr>
<td>Course Convener:</td>
<td>Associate Professor Steve Sault</td>
</tr>
<tr>
<td>Incompatibility</td>
<td>FINM2002</td>
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<tr>
<td>Phone:</td>
<td>6125 4869 (X54869 on campus)</td>
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<tr>
<td>Email:</td>
<td><a href="mailto:Stephen.Sault@anu.edu.au">Stephen.Sault@anu.edu.au</a></td>
</tr>
<tr>
<td>Office hours for student consultation:</td>
<td>Tuesday 9am to 11am</td>
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</tbody>
</table>

Research Interests
Steve Sault’s current research interests focus on equity market anomalies and the information content of ASX trading queries. Steve Sault is also involved in a number of research projects utilising computational linguistics to assess the content and sentiment of online information.

Relevant administrator if any (optional)
Tracy Skinner

Phone: 6125 0487
Email: Tracy.Skinner@anu.edu.au

SEMESTER 1
2016

http://programsandcourses.anu.edu.au/course/FINM7041
COURSE OVERVIEW

Learning Outcomes
On satisfying the requirements for this course, students will have the knowledge and skills to:

• Explain in detail how options, futures, forwards, and swaps can be used on a range of underlying assets/commodities;
• Understand and be able to demonstrate the appropriate use of option trading strategies;
• Demonstrate how we use derivatives for a range of assets/commodities including stocks, interest rates, foreign exchange as well as exotic instruments and weather and electricity derivatives;
• Explain in detail and be able to demonstrate various models to price forward, futures, swap and option contracts; and,
• Use these pricing models for risk management.

Assessment Summary

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Value</th>
<th>Due Date</th>
<th>Date for Return of Assessment</th>
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</thead>
<tbody>
<tr>
<td>1. In-Tutorial Quizzes</td>
<td>15%</td>
<td>See Course Schedule for details</td>
<td>In the following tutorial</td>
</tr>
<tr>
<td>2. Assignment</td>
<td>25%</td>
<td>1pm, Thursday 21st April</td>
<td>16 May</td>
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<tr>
<td>3. Final Examination</td>
<td>60%</td>
<td>TBA</td>
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Research-Led Teaching
Students undertaking this course will be imparted with the necessary skills for industry based research. This will include involving students in critical analysis of industry based problems.

Feedback
Staff Feedback
Students will be given feedback in the following forms in this course:

• Written comments both individually and to groups; and,
• Verbal comments both individually and to the whole class.

Student Feedback
ANU is committed to the demonstration of educational excellence and regularly seeks feedback from students. One of the key formal ways students have to provide feedback is through Student Experience of Learning Support (SELS) surveys. The feedback given in
these surveys is anonymous and provides the Colleges, University Education Committee and Academic Board with opportunities to recognise excellent teaching, and opportunities for improvement.

For more information on student surveys at ANU and reports on the feedback provided on ANU courses, go to

http://unistats.anu.edu.au/surveys/selt/students/ and
http://unistats.anu.edu.au/surveys/selt/results/learning/

Policies
ANU has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University’s academic standards, and implement them. You can find the University’s education policies and an explanatory glossary at:

http://policies.anu.edu.au/

Students are expected to have read the Academic Misconduct Rules 2014 before the commencement of their course.

Other key policies include:
• Student Assessment (Coursework)
• Student Surveys and Evaluations

Additional course costs
The only other additional course costs are a calculator, textbook and printing materials.

Examination material or equipment
The only permitted materials in the examination are a calculator, pen and ruler.
# COURSE SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Activities</th>
<th>Student Preparation</th>
<th>Assessment Schedule</th>
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</thead>
<tbody>
<tr>
<td>Wk 1 15 Feb</td>
<td>Course Overview and Extended Analysis of Forwards, Futures and Options Contracts</td>
<td>Lecture 1</td>
<td>Lecture Notes 1 Hull <em>et al</em>. Ch. 1 &amp; 2</td>
<td></td>
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<tr>
<td>Wk 2 22 Feb</td>
<td>Hedging Strategies Using Futures</td>
<td>Lecture 2 Tutorial 1</td>
<td>Lecture Notes 2 Hull <em>et al</em>. Ch. 3 &amp; 5</td>
<td>Tutorial 1 Questions</td>
</tr>
<tr>
<td>Wk 3 29 Feb</td>
<td>Interest Rate Contracts and Swaps</td>
<td>Lecture 3 Tutorial 2</td>
<td>Lecture Notes 3 Hull <em>et al</em>. Ch. 4 &amp; 7</td>
<td>Tutorial 2 Questions Quiz 1</td>
</tr>
<tr>
<td>Wk 4 7 March</td>
<td>Options and Options Trading Strategies</td>
<td>Lecture 4 Tutorial 3</td>
<td>Lecture Notes 4 Hull <em>et al</em>. Ch. 9, 10 &amp; 11</td>
<td>Tutorial 3 Questions Quiz 2</td>
</tr>
<tr>
<td>Wk 5 14 March</td>
<td>Binomial Model for Pricing Options</td>
<td>Lecture 5 Tutorial 4</td>
<td>Lecture Notes 5 Hull <em>et al</em>. Ch. 12</td>
<td>Tutorial 4 Questions</td>
</tr>
<tr>
<td>Wk 6 21 March</td>
<td>Black-Scholes Model for Pricing Options</td>
<td>Lecture 6 Tutorial 5</td>
<td>Lecture Notes 6 Hull <em>et al</em>. Ch. 13</td>
<td>Tutorial 5 Questions Quiz 3</td>
</tr>
<tr>
<td>Wk 7 28 March</td>
<td>Index and Foreign Exchange Options</td>
<td>Lecture 7 Tutorial 6</td>
<td>Lecture Notes 7 Hull <em>et al</em>. Ch. 15</td>
<td>Tutorial 6 Questions</td>
</tr>
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### 4 April – 15 April 2016 Non-Teaching Period

| Wk 8 18 April | Options on Futures Contracts | Lecture 8 Tutorial 7 | Lecture Notes 8 Hull *et al*. Ch. 16 | Tutorial 7 Questions Assignment Due |
| Wk 9 25 April | The Greek Letters | Lecture 9 Tutorial 8 | Lecture Notes 9 Hull *et al*. Ch. 17 | Tutorial 8 Questions |
| Wk 10 2 May | Exotic Options and other Non-standard Products | Lecture 10 Tutorial 9 | Lecture Notes 10 Hull *et al*. Ch. 22 | Tutorial 9 Questions Quiz 4 |
| Wk 12 16 May | Ethics in Risk Management | Lecture 12 Tutorial 11 | CFA Standards of Practice Handbook, Standard IV: Duties to Employers. pgs. 105-126 | Tutorial 11 Questions Quiz 6 |
| Wk 13 23 May | Review | Lecture 13 Tutorial 12 | Lecture Notes 12 | Tutorial 12 Questions |
ASSESSMENT REQUIREMENTS

Assessment Tasks

Assessment Task 1: In-Tutorial Quizzes (15%)
Details of task:
- 6 quizzes held within tutorials on the weeks specified in the Course Schedule.
- The quizzes will be 10 - 15 minutes in duration, at the end of the tutorial.
- Students are required to prepare worked solutions to tutorial questions, bring these solutions to tutorials, and be prepared to participate in tutorial discussions.
- Students will be required to sit 6 in-tutorial quizzes throughout the semester.
- Students MUST sit the quiz in the tutorial they are enrolled in; otherwise, the quiz will not count.
- These quizzes will be run according to the Course Schedule (unless otherwise stated by the lecturer).
- The content for the quizzes will be limited to the required material for the tutorial in which it is held.
- Students’ best 5 marks will count towards 15% of their overall course grade.
- A number of quizzes will be of a difficulty similar to exam questions to give students practice at attempting exam type questions under examination conditions.
- The estimated return date is 1 week after the quiz is held.

Assessment Task 2: Assignment (25%)
Details of task:
- This assignment accounts for 25% of students’ final grade for FINM7041;
- The assignment is due at 1pm on Thursday the 21 April.
- The assignment is to be undertaken either individually or in groups of no more than 4 students;
- Students enrolled are to complete all questions for the assignment;
- Each assignment should include the coversheet located in the assignment folder on Wattle;
- All questions regarding the assignment must be directed to the lecturer, Steve Sault, as all tutors have been told not to answer questions. This will ensure fairness as all students will receive the same advice when asking questions;
- If assignments are completed by a group, only one copy of the assignment is to be submitted to the assignment boxes outside the RSFAS School Office;
- The assignments will be returned on 18 May; and,
- Further details on the assignment will be provided in lecture 3.
- **PLEASE NOTE:** Late submission of assignments will **NOT** be accepted. If a student (or group) submits their assignment after the due date listed, the student (or group members) will receive a mark of zero for the assignment.

Assessment Task 3: Final Examination (60%)
Details of task:
The final examination will be based on all the work covered throughout the duration of the semester. The final examination is worth 60% of the overall course grade. The exam will include a mixture of theoretical and numerical questions. Students will be provided with further details regarding the exam as it approaches.
Assignment submission

Hard Copy Submission: Assignment reports should be submitted to the appropriate assignment box at the RSFAS School Office by the due date. Submitted assignments must include the cover sheet provided on Wattle. Please keep a copy of the assignment for your records.

Extensions and penalties
Extensions and late submission of assessment pieces are covered by the Student Assessment (Coursework) Policy and Procedure.

The Course Convener may grant extensions for assessment pieces that are not examinations or take-home examinations. If you need an extension, you must request it in writing on or before the due date. If you have documented and appropriate medical evidence that demonstrates you were not able to request an extension on or before the due date, you may be able to request it after the due date.

No submission of assessment tasks without an extension after the due date will be permitted. If an assessment task is not submitted by the due date, a mark of 0 will be awarded.

Returning assignments
Assignments will be available for collection in the filing cabinets outside RSFAS School office on Monday 18 May 2016.

Resubmission of assignments
Resubmission of assignments is not permitted.

Referencing requirements
All referencing for the assignment should be within the text of the document. Examples will be given in the lecture.

Reading Lists
Prescribed Texts and Reference Materials


Students are required to read Pages 105-126 of the CFA Standards of Practice Handbook, Standard IV: Duties to Employers. This content will be discussed in Lecture 12. This document can be found at:


Communication
It is preferable to contact the lecturer via email (stephen.sault@anu.edu.au).
Email
If necessary, the lecturers and tutors for this course will contact students on their official ANU student email address. Information about your enrolment and fees from the Registrar and Student Services’ office will also be sent to this email address.

Announcements
Students are expected to check the Wattle site for announcements about this course, e.g. changes to timetables or notifications of cancellations. Notifications of emergency cancellations of lectures or tutorials will be posted on the door of the relevant room.

Scaling
Your final mark for the course will be based on the raw marks allocated for each of your assessment items. However, your final mark may not be the same number as produced by that formula, as marks may be scaled. Any scaling applied will preserve the rank order of raw marks (i.e. if your raw mark exceeds that of another student, then your scaled mark will exceed the scaled mark of that student), and may be either up or down.

Tutorial and/or Seminar Registration
Tutorial and/or Seminar signup for this course will be done via the Wattle website. Detailed information about signup times will be provided on Wattle or during your first lecture. When tutorials are available for enrolment, follow these steps:

1. Log on to Wattle, and go to the course site.
2. Click on the link “Tutorial signup here”
3. On the right of the screen, click on the tab “Become Member of ……” for the tutorial class you wish to enter.
4. Confirm your choice

If you need to change your enrolment, you will be able to do so by clicking on the tab “Leave group…” and then re-enrol in another group. You will not be able to enrol in groups that have reached their maximum number. Please note that enrolment in ISIS must be finalised for you to have access to Wattle.

SUPPORT FOR STUDENTS
The University offers a number of support services for students. Information on these is available online from http://students.anu.edu.au/studentlife/