

## ECON 3050 Investment Analysis

Lecturer: Dr. Peter McGoldrick  
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### Contact hours:

Lectures: Wednesday 1700hrs, Room 3074  
Friday 1300hrs, Theatre 2039  
Tutorials: Thursday 1300hrs, Room 4047 (approximately fortnightly)  
Office hours: Wednesday after the lecture or by appointment, room 3022

### Course description:

This course introduces students to key concepts of financial economics. We develop analytical tools in order to assess various types of investment vehicles, such as fixed income securities, stocks, and derivatives. Further, some financial economic models and hypothesis are introduced and we discuss the optimal capital structure for firms. Everything is developed from first principles and for the most part the level of mathematics and statistics does not extend beyond JS Maths & Stats. Theory is dealt with in lectures and applied numeric problems in fortnightly tutorials. Students should note, however, that this is an analytical economics course that makes constant use of tools derived from mathematical and statistical concepts. The course should be manageable for all who fulfil the requirements, but is likely to stretch most students somewhat. Students interested in working in areas related to the subject matter are likely to find the course of value for their career.

To begin with we shall discuss fixed income securities, with an emphasis on pricing and various measures of return (compounding, effective annual yield, yield to maturity, holding period return), the term structure of interest rates (yield curve & forward rates), and bond portfolio management (duration, convexity, management strategies, term premium hypotheses). Then we shall incorporate risk into our evaluation of assets. We will discuss risk and choices under uncertainty (risk aversion & Markowitz portfolio optimisation), equilibrium models (Capital Asset Pricing Model & Arbitrage Pricing Theory), followed by considerations of market efficiency and choice of firm capital structure. Finally, we shall introduce options and derivatives.

### Assessment:

Term tests in the final week of Michaelmas and Hilary Terms, which will be two hours long, each determine 20% of the final grade. The end-of-year exam, which will be three hours in length, accounts for 60% of the final grade.

### The essential textbook for this course is:

- *Investments: Spot and Derivative Markets*, Keith Cuthbertson and Dirk Nitzsche, Chichester: John Wiley & Sons, 2001

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### Supplementary reading:

- *Quantitative Financial Economics: Stocks, Bonds and Foreign Exchange*, Keith Cuthbertson and Dirk Nitzsche, Chichester: Wiley, 2004. (This textbook treats the material at a higher level, with time-series econometric and hypothesis testing. It is likely to be useful for students who intend to take Economics of Security Markets.)
- *Financial Engineering: Derivatives and Risk Management*, Keith Cuthbertson and Dirk Nitzsche, Chichester: Wiley, 2001. (This book is useful for the last section of the course that deals with derivatives.)
- *Investments*, Bodie, Kane and Marcus, 6<sup>th</sup> edition, London: Irwin/McGraw-Hill, 2005. (This book has been used in the past, but is probably inferior to the core book.)
- *Mathematics for Economics and Business*, Ian Jacques, 4<sup>th</sup> edition, London: Prentice Hall, 2003. (Your JS Maths & Stats book for elementary mathematical review. Chapter three for elementary financial mathematics.)
- Students will be encouraged to sample some of the classics of financial economics from the academic journal articles.

### Course Materials:

- Lecture notes and tentative solutions to tutorial questions will be available for download at: [www.pmcg.eu](http://www.pmcg.eu)

### Useful Websites:

- <http://www.investopedia.com> (useful source for jargon)
- <http://www.jstor.org> (for academic publications)
- <http://scholar.google.com> (for academic publications)