MODULE CODE: EC3050
MODULE TITLE: INVESTMENT ANALYSIS

Lecturers: Dr Eleanor Denny / Dr Robert Kelly
Phone: 1522 / 1043
Email: dennye@tcd.ie / robert.kelly@centralbank.ie
Office: 3016 / TBC
Office Hours: TBC / TBC

ECTS VALUE: 10

CONTACT HOURS
24 hours of lectures per term
8 hours of tutorials per term
1 hour per week on readings

RATIONALE AND AIMS
This module analyses, at both a practical and theoretical level, the process of investment in financial markets. Its aims are to introduce students to the various types of financial instruments in common use and to the economic theories that explain how they are priced. The types of securities considered include interest-bearing securities, equities and derivatives (options, futures, etc.). The focus for the first half of the module will be on fixed income securities and derivatives. As we will see, the principles to be discussed and the analytical tools to be presented have a much wider application in making decisions under conditions of uncertainty. Students are also required to complete a project involving the collection and analysis of financial
data.
The second half of the module explores how financial markets operate and how securities are bought and sold. The trade-off between higher average returns and more 'risky' pay-offs is then discussed. The problem of determining an optimal investment strategy, given beliefs about the probability distribution of returns, is also addressed. Other issues considered include the informational efficiency of financial markets and systematic pricing failures, the role of behavioural biases, and the relative usefulness of fundamental analysis and technical analysis in predicting price movements.

This module does not assume previous knowledge of financial economics and for the most part the level of mathematics and statistics does not extend beyond JS Maths & Stats. Students should note, however, that this is an analytical economics module that makes constant use of tools derived from mathematical and statistical concepts. Students interested in working in areas related to investment and finance are likely to find the course of value for their career.

**MODULE CONTENT**

Michaelmas Term:

- Bond prices and yields
- Term structure of interest rates
- Managing bond portfolios
- Introduction to Option markets
- Option valuation
- Futures markets
- Futures and swaps

Hilary Term:

- Introduction & Diversification
- The Efficient Frontier and The Single Index Model
- Capital Asset Pricing Model (CAPM)
- Zero-Beta CAPM
- Empirical Tests of CAPM
- Arbitrage Pricing Theory (APT)
- Debt and Equity, Efficient Market Hypothesis (EMH) and Technical Analysis
- Behavioural Finance

**LEARNING OUTCOMES**

On successful completion of this module, students will be able to:

- Explain the components of bond pricing and interpret the factors influencing bond risk
- Discuss measures of bond price sensitivity and relate risk factors to the current situation in the bond markets
Outline the payoffs of various option strategies and assess the complexities of option pricing

Illustrate the use of options and futures in risk management

Explain and critique the Capital Asset Pricing Model (CAPM)

Contrast the Arbitrage Pricing Theory and Capital Asset Pricing Model

Explain the Efficient Market Hypothesis and discuss the issues of behavioural finance

METHODS OF TEACHING AND STUDENT LEARNING
The teaching strategy is a mixture of lectures, tutorials, problem solving, and practical application. The format of lectures is conventional; however, as a large proportion of the module is practical and based on real markets there is much emphasis on media reporting and real-life examples. Also, in term one there is a guest lecture for this module from industry. This guest lecture shows the students how the theory they are learning in class is applied in practice.
The students are set fortnightly problem sheets which they must attempt and these are then discussed and completed in the smaller tutorial sessions.
In term 1, the students are required to
conduct a practical project using real financial data. The students must write a report on this project which is worth 15% of the final grade.

**METHODS OF ASSESSMENT**

Final exam: 70% of the overall module marks

Michaelmas Term: Project worth 15% of overall module marks

Hilary Term: Assignment worth 10% of the final marks and 5% for tutorial attendance

**EVALUATION**

Student feedback and evaluation of this course will be requested in both Michaelmas and Hilary terms and students are actively encouraged to participate in this process.

**INDICATIVE RESOURCES**

**Primary Text:**


**Supplementary Texts:**


Hall, 2003. (Chapter three for elementary financial mathematics.)


Notes available online on WebCT and at [www.rkeconomics.com](http://www.rkeconomics.com).

Also, Dr. Denny runs a Twitter blog where she posts daily links to articles of interest in the press. Details provided in lecture.