

(Spring 2016)

PREREQUISITES:

FN 2028 Financial Mathematics **or** FN 3005 Foundations of Corporate Finance
 FN 3032 Foundations of Investments
 FN 3113 Corporate Finance
 FN 3237 Applied Financial Econometrics
 MA 2021 Applied Statistics

CATALOG DESCRIPTION:

This course applies mathematical and statistical methods to financial economics problems. The course begins with the underlying financial theory and ends with a mastery of building quantitative skills necessary to carry out empirical work in finance. The course also addresses topics such as asset pricing and financial markets and utilizes additional concepts from economics, accounting and risk management.

RATIONALE:

The development of quantitative methods in finance is quite recent and has been paralleled by fast expansion of financial markets and increasing variety of financial products. Given the importance of quantitative analysis, this course /develops students' ability to quantify and evaluate finance theories using actual examples of empirical finance.

LEARNING OUTCOMES:

As a result of taking this module, the student should be able to:

1. Demonstrate knowledge of various trading strategies, such as determine asset prices, manage risk, and identify profitable opportunities.
2. Assess the implications of efficient markets, financial market microstructure and various types of arbitrage.
3. Effectively investigate and address practical issues in the forecasting of key financial market variables.

METHOD OF Teaching AND LEARNING:

In congruence with the teaching and learning strategy of the college, the following tools are used:

1. In-class exercises and actual examples of empirical finance that help the lecturer to illustrate the basic concepts of the course.
2. In-class discussion of journal articles to expand exposure on course content beyond the textbook and generate discussion on current financial issues.
3. Use of power point and econometrics software to present the material.
4. Self-study in computer class (doing practical work using financial data sets)

ASSESSMENT:**Summative:**

First Assessment: Individual project (1,400-1,800 words)	40
Second Assessment: In-class written examination (Two-hour, closed-book, problems/essays combination)	60

Formative:

Practice problem sets	0
Journal Articles	0

The formative "practice problem sets" aims at preparing students for their individual project as well as the final exam.

The first summative assessment tests 1 and 2 Learning Outcomes

	The second summative assessment (final written examination) tests all learning outcomes with an emphasis on learning outcomes 3 and 4
indicative READING:	<p>REQUIRED READING: Cuthbertson, K. and Nitzche, D. (2004). <i>Quantitative Financial Economics</i>. Wiley & Sons, 2nd ed.</p> <p>RECOMMENDED READING:</p> <p>Wilmott, P. (2001). <i>Paul Wilmot introduces Quantitative Finance</i>. Wiley & Sons.</p> <p>Other library sources, including journal articles accessed through the library databases are recommended by the instructor throughout the semester.</p>
INDICATIVE MATERIAL: (e.g. audiovisual, digital material, etc.)	N/A
COMMUNICATION REQUIREMENTS:	Participation in class discussion should be delivered in a professional manner.
SOFTWARE REQUIREMENTS:	Excel, Financial data bases, Econometric software(Eviews)
WWW RESOURCES:	www.ft.com www.bloomberg.com www.finance.yahoo.com
INDICATIVE CONTENT:	<ol style="list-style-type: none"> 1. Risk theory and models 2. Quantitative techniques 3. Efficient markets and behavioral finance 4. Market microstructure 5. Options and financial engineering 6. Black-Scholes and binomial tree models 7. Forecasting financial variables