# F71PT Portfolio Theory

## Course Details

**Course Code:** F71PT  
**Full Course Title:** Portfolio Theory  
**SCQF Level:** 11  
**SCAF Credits:** 15  
**Available as Elective:** No

## Delivery Level

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**Additional Information:**

## Course Aims

The aim of this course is to provide post graduate students with a broad knowledge of asset pricing and portfolio selection models.

## Learning Outcomes – Subject Mastery

On completion of this module the student should be able to:

- Derive the properties of a utility function
- State the conditions for absolute, first order and second order stochastic dominance.
- Calculate some important measures of risk: variance, semi-variance, shortfall probability and mean shortfall.
- Calculate the mean and variance of return on a portfolio of assets.
- Demonstrate an understanding of methods used to select portfolios of assets, including utility theory, stochastic dominance and mean-variance analysis.
- Describe the purpose and calculation of the following: opportunity set, efficient frontier, indifference curve, separation theorem.
- Develop a critical understanding on the theory of mean-variance model and understand its modifications using other risk measures.
- Describe the properties of single-factor and multi-factor models. Show how to fit a single-factor model to market price data.
F71PT Portfolio Theory

Discuss the assumptions underlying and applications of the Capital Asset Pricing Model.

Derive the capital market line and the security market line

Understand the concept of risk premium in Arbitrage Pricing Theory.

State the weak, semi-strong and strong forms of the efficient market hypotheses and discuss their economic implications

Discuss the topics in prospect theory: framing, reference points, probability

LEARNING OUTCOMES – PERSONAL ABILITIES

Demonstrate the ability to earn independently

Manage time, work to deadlines and prioritise workloads

Present results in a way which demonstrates they have understood the technical and broader issues of asset pricing.

Communicate findings effectively in the financial services industry.

SYLLABUS

- Utility Theory
- Stochastic Dominance
- Measures of Investment Risk
- Mean-Variance Portfolio Theory
- Models of Asset Returns
- Capital Asset Pricing Model
- Efficient Market Hypothesis and Behavioural Finance and Prospect Theory

COURSE RELATIONSHIPS

N/A

LOCATION AND ASSESSMENT METHODS

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<tr>
<th>Edi</th>
<th>SBC</th>
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