## COURSE DETAILS

**Course Code:** F71AR  
**Full Course Title:** Applied Risk Management  
**SCQF Level:** 11  
**SCAF Credits:** 15  
**Available as Elective:** No

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## COURSE AIMS

The aims of this course are:

- To equip students with a variety of tools to tackle problems involving univariate financial time series  
- To provide a good grounding in the best practice of risk management within an organisation  
- To understand economic measures of capital and capital allocation  
- To have a thorough understanding of operational risk in its various forms  
- To identify and measure risks and then to take actions to mitigate risks and exploit risky opportunities through good risk management strategies.

## LEARNING OUTCOMES – SUBJECT MASTERY

On completion of this course the student should be able to:
F71AR Applied Risk Management

- Analyse a variety of financial time series
- Demonstrate a good understanding of the different types of operational risks that might arise in an organisation, and be able to identify potential operational risks in a given scenario
- Use quantitative and qualitative methods for identifying and analysing operational risk
- Demonstrate an understanding of the main international guidelines on good risk management practice and good governance
- Understand how a ratings agency assess risk management practice and use this to improve risk management practice in an organisation
- Show how to measure the economic value of a risky venture and how this can be used to influence decision making
- Understand the different methods for how to allocate capital within an organisation and apply these methods in a variety of situations
- Demonstrate how to establish at Board level an organisation's risk appetite, risk objectives and risk tolerances
- Show to optimize risk and opportunities given Board-level constraints on risk appetite and risk tolerances
- Determine an organisation's overall risk exposure
- Show an understanding of the importance of asset-liability modeling for a financial institution
- Analyse real and hypothetical case studies of good and bad risk management practice
- Analyse real and hypothetical scenarios from the perspective of different stakeholders

- Develop and recommend strategies for active management of risks using a variety of methods
  - Recommend risk mitigation strategies by transfer of risk
  - Develop strategies for management and mitigation of credit risk
  - Recommend risk reduction strategies without transferring risk to an external agency
  - Demonstrate an understanding of the pros and cons of the different approaches to risk mitigation
  - Show an understanding of modern methods for management of interest-rate risk

LEARNING OUTCOMES – PERSONAL ABILITIES

- Show an appreciation of the interface between academic theory and industrial practice
- Demonstrate the ability to learn independently and as part of a group
- Manage time, work to deadlines and prioritise workloads
- Present results in a way that demonstrates that they have understood the technical and broader issues of financial risk management
- Show an appreciation of the societal role of risk management in protecting the consumer and other stakeholders
<table>
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<th>SYLLABUS</th>
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| **Operational risk management**  
  - Non-quantitative and quantitative methods and tools for managing operational risk  
  - Different ways of quantifying operational risk under Basel II |
| **Banking and insurance regulatory systems** |
| **Risk management governance and culture**  
  - Risk management governance structures and the risk management culture  
  - Governance issues including agency, audit and legal risk  
  - Rating agency assessments of an organisation's risk management operation |
| **ERM frameworks and assessment** |
| **Risk appetite and risk tolerance** |
| **Economic capital and capital allocation** |
| **Credit risk management** |
| **Modelling and assessment of market risk**  
  - Models for volatility clustering  
  - Non-normality, fat tails and skewness  
  - Assessment of value at risk  
  - Backtesting VaR models |
• **Market risk management**
  o Dynamic versus static hedging using financial derivatives; practical considerations

• **Interest rate risk management**
  o Modern approaches to immunisation of interest-rate risk
  o Asset-liability modelling

• **How risks and risky opportunities affect the selection of strategy**

• **Advantages and disadvantages of different approaches to risk reduction; e.g. costs and benefits; information asymmetry; transparency; liquidity; basis risk; moral hazard**

• **Optimising risks and opportunities relative to the Board’s declared risk appetite and risk tolerances**

• **Case studies: examples of past disasters and examples of good practice**
  o Risk analysis of real and hypothetical scenarios including non-quantifiable risks; views of different stakeholders

### COURSE RELATIONSHIPS

N/A

### LOCATION AND ASSESSMENT METHODS

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