

## Module Specification

### Module Summary Information

|          |                       |                                 |
|----------|-----------------------|---------------------------------|
| <b>1</b> | <b>Module Title</b>   | Quantitative Methods of Finance |
| <b>2</b> | <b>Module Credits</b> | 20                              |
| <b>3</b> | <b>Module Level</b>   | 4                               |
| <b>4</b> | <b>Module Code</b>    | FIN4006                         |

|   |                        |
|---|------------------------|
| <b>5</b>  | <b>Module Overview</b> |
| <p>This module is designed to help students understand the quantitative methods necessary to allow progression in Finance, Investment, Business and Accounting professions. It also serves as an introduction to the various analytical approaches required in the manipulation and presentation of business type data and demonstrates how its analysis can be used to make commercially sensitive decisions.</p> <p>Understanding of basic quantitative methods are highly essential to tackle day to day issues arising in business professions. This module will provide help students gain ability to formulate problems into quantitative models, to aid the successful resolution of the problem. Students will learn the importance of data, its presentation and the cause &amp; effect relationship in data. Students will learn how historical data can be analysed using various statistical methods and how future trends can be identified. Students will learn to derive potential solutions to problems by learning data analysis and interpretation of results from historical quantitative information. Using output from mathematical and statistical models, students will learn to analyse, interpret and derive potential outcomes from quantitative information.</p> <p>The module will utilise Microsoft Excel and Thomson Reuters Eikon software's in order to make the module more effective and practice oriented. This will also increase the employability of the students by building up their real-world skills.</p> <p>Students will be able to demonstrate an understanding of applying quantitative methods to a wide range of situations in the Finance, Investment, Business and Accounting professions upon completion of this module. Students will demonstrate the ability to analyse the finance and investment problems using appropriate mathematical and statistical tools. Students will also be able to communicate the results of quantitative analyses in the contexts of finance and investment, to both specialists and non-specialists, recognising any limitations of the underlying models. They will also be able to conduct mathematical and investigations within the context of finance and investment.</p> |                        |

| 6 | Indicative Content   |
|---|--|
|   | <p><b>Week 1</b><br/>Introduction to basic mathematical concepts</p> <p><b>Week 2</b><br/>Algebra and Matrix Algebra</p> <p><b>Week 3</b><br/>Data Collection and Presentation</p> <p><b>Week 4</b><br/>Summarising Data and Index Numbers</p> <p><b>Week 5</b><br/>Analysis of Sample data</p> <p><b>Week 6</b><br/>Financial Mathematics</p> <p><b>Week 7</b><br/>Graduate Plus weeks activities</p> <p><b>Week 8</b><br/>Probability and Probability distribution</p> <p><b>Week 9</b><br/>Introduction to inferential statistics</p> <p><b>Week 10</b><br/>Examining the cause and effect using correlation and regression</p> <p><b>Week 11</b><br/>Introduction to Forecasting</p> <p><b>Week 12</b><br/>Linear Programming</p> <p><b>Weeks 13-15</b><br/>One-to one and/or small group support, revision and assessment</p> |

| <b>7</b>   |          | <b>Module Learning Outcomes</b>  |
|--|----------|--|
| <b>On successful completion of the module, students will be able to:</b> |          |  |
|  | <b>1</b> | Recognise different types of numerical data and different data collection processes and present data effectively for users in business and management. |
|  | <b>2</b> | Explain and use the basic concepts of probability and probability distributions, and their applications in business and management.                    |
|  | <b>3</b> | Apply statistical methods to investigate interrelationships between, and patterns in, business variables.  |

| <b>8</b>                |                   | <b>Module Assessment</b> |                  |  |
|-------------------------|-------------------|--------------------------|------------------|--|
| <b>Learning Outcome</b> |                   |                          |                  |  |
|                         | <b>Coursework</b> | <b>Exam</b>              | <b>In-Person</b> |  |
| <b>1, 2</b>             |                   | <b>X</b>                 |                  |  |
| <b>1, 2, 3</b>          | <b>X</b>          |                          |                  |  |

| <b>9</b>   |              | <b>Breakdown Learning and Teaching Activities</b> |  |
|--|--------------|---|--|
| <b>Learning Activities</b>   | <b>Hours</b> |   |  |
| <b>Scheduled Learning (SL)</b><br>includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable            | 48           |   |  |
| <b>Directed Learning (DL)</b><br>includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning, as directed on VLE | 48           |   |  |
| <b>Private Study (PS)</b><br>includes preparation for exams  | 104          |   |  |
| <b>Total Study Hours:</b>  | 200          |   |  |