# Programme Specification ARO 034a

## Section 1 Key Facts

<table>
<thead>
<tr>
<th>Awarding Body</th>
<th>University of Stirling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner Institution</td>
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</tr>
<tr>
<td>Programme Name</td>
<td>Behavioural Decision Making for Finance</td>
</tr>
<tr>
<td>Award</td>
<td>MSc</td>
</tr>
<tr>
<td>Faculty</td>
<td>SMS</td>
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<tr>
<td>Division (if applicable)</td>
<td>Economics</td>
</tr>
<tr>
<td>UCAS Code (UG only)</td>
<td>n/a</td>
</tr>
<tr>
<td>Programme Code</td>
<td>TDX44-DMF</td>
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<tr>
<td>Mode of Study</td>
<td>Full Time</td>
</tr>
<tr>
<td>Location/Method of Study</td>
<td>On Campus – UK</td>
</tr>
<tr>
<td>Admission Points</td>
<td>September</td>
</tr>
<tr>
<td>Length of Programme</td>
<td>12 months</td>
</tr>
<tr>
<td>SCQF Level</td>
<td>11</td>
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<tr>
<td>Total Credit Value</td>
<td>180</td>
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<tr>
<td>ECTS Credit Value</td>
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<tr>
<td>Relevant QAA Subject Benchmark</td>
<td>Business and Management (Masters)</td>
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<tr>
<td>Professional Body Accreditation (all relevant accreditations to be listed)</td>
<td>n/a</td>
</tr>
<tr>
<td>Programme Director</td>
<td>David Comerford</td>
</tr>
<tr>
<td>Advisor of Studies</td>
<td></td>
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<tr>
<td>Programme Approved</td>
<td>30 / 11 / 2017</td>
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<tr>
<td>Last Updated</td>
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PROGRAMME SUMMARY

Understanding the psychology of the markets has never been more important. In the age of big data, there is unprecedented opportunity to uncover winning investment strategies. In the age of the internet and financial deregulation, there are an unprecedented number of exploitative financial products on offer. Our MSc in Behavioural Decision Making for Finance will provide you with a toolkit to successfully navigate this environment in a profitable but socially responsible manner.

The program provides the analytical skills needed for a successful career in banking, finance and related areas, but its unique selling point relative to other programs is that it also teaches cutting edge theories in financial decision making and in the rapidly growing field of behavioural finance. Its aim is to make you aware of the biases that afflict market decision making.

One outcome is that it will equip you with the critical and quantitative skills to assess forecasts, investment strategies, financial products and financial regulations.

A second is that it will equip you with the research skills to generate forecasts of your own: forecasts of demand for financial products; forecasts of the direct and indirect impacts of regulations; and forecasts of overall stock market performance that correct for common biases.

A third is to equip you with technical skills to develop and pilot test investment strategies, product designs and regulations.

A final goal is to equip you with the writing and presentation skills to communicate your findings and to highlight the value added by your evidence-based research.

The final project will assess these goals. The project for the program will be for you to write an investor prospectus that presents theory and evidence in support of a behaviourally-informed investment portfolio.

The ultimate aim of the program is that our graduates can enter a job interview and talk the interviewers through some insight related to investment that the interviewers themselves did not know. It will highlight that you are capable of original research and of making a substantial contribution to whichever organization you wish to enter; that you are intellectually curious and have a passion for learning more about the investment process; and that you are a clear communicator. We will lead you towards this goal through our seminar discussions and through your work on the final research project.

The program capitalizes on two strengths and specializations of Stirling Management School – research expertise in behavioural science generally and in behavioural finance more specifically. Our research at Stirling does not merely apply insights from psychology to finance, but develops fundamental psychological theory using finance data.

PROGRAMME LEARNING OUTCOMES

Overarching Learning Outcomes

On successful completion of this programme, you should be able to:

- understand in depth core concepts and theory in behavioural economics;
- Demonstrate a knowledge of and ability to apply the major theoretical tools and theories of finance, and their relevance and application to theoretical and practical problems (e.g. financial mathematics and capital budgeting criteria; informational efficiency; optimal risk sharing; asset pricing models);
- Calculate and interpret financial data including that arising in the context of the firm or household from data generated in financial markets;
• Demonstrate understanding of and ability to analyse the relationship between financial theory and empirical testing, and application of this knowledge to the appraisal of the empirical evidence. (e.g. the efficient markets hypothesis; pricing of derivatives and other securities; bond portfolio management; exchange rates; raising capital and capital structure);
• Demonstrate an understanding of and ability to communicate on the financing arrangements and governance structures of business entities, and an appreciation of how theory and evidence can be combined to assess the effectiveness and efficiency of such arrangements;
• Carry out statistical analyses (e.g. OLS, probit regression) using standard software;
• Understand financial statements, and a basic appreciation of the limitations of financial reporting practices and procedures;
• To understand ethical considerations within financial decision-making processes in the context of the firm;
• Critically appreciate the complex conceptual, design, and statistical issues involved in testing theory and causality;
• Develop, present and communicate arguments clearly and logically both in writing and orally;
• Demonstrate self-direction and the capacity to seek out relevant information, synthesise materials, and produce outputs with minimal supervision and in a timely fashion;
• Conduct an independent research (i.e. dissertation or investment prospectus) that presents evidence that tests a theory;
• Work effectively as part of a team.

WHAT WILL I BE EXPECTED TO ACHIEVE?

Detailed Learning Outcomes

On successful completion of this programme, you should be able to:

Knowledge and Understanding:

1. Explain in-depth the core theories in financial decision making;
2. Explain in-depth the core concepts and theories in behavioural economics;
3. Understand how to assess financial instruments in terms of risk and market fundamentals;
4. Feel comfortable trading financial products;
5. Develop an understanding of how psychological insights have been and can be applied to financial decision making and regulation;
6. Develop, present and communicate arguments clearly and logically both in writing and orally.
7. Manage time effectively to meet deadlines;
8. Conduct an independently constructed piece of research (i.e. dissertation) that shows a highly developed understanding of methodological issues;
9. Work effectively as part of a team.

Intellectual, Practical and Transferable Skills and other attributes:

1. Master not only the material that is covered by our programs, but that you are equipped with the skills to keep up to date with developments in the field. We will direct you to academic journals and mailing lists where the latest research is disseminated and discussed.

2. Communicate that you are highly employable. Behavioral Science is a young field and employers are seldom aware of how it could be helpful to their organization. We will always point out real-world applications of the concepts that we encounter in lectures. Our seminar discussions and projects will focus on real-world business or policy problems.

3. A goal of the final research project is that you can enter a job interview and talk the interviewers through some insight related to investment that the interviewers themselves did not know. This is a natural deliverable from a piece of original research. It will highlight that you are capable of original research and of making a substantial contribution to whichever organization you wish to enter; that you are intellectually curious and have a passion for learning more about the
investment process; and that you are a clear communicator.

4. Demonstrate quantitative methods skills i.e. how to set up a data set, import it into a software package and run regressions and time-series analyses;
5. To interpret data and avoid the bias of extrapolation – learn to identify what a given data set can and cannot tell us;
6. To learn – apply techniques to quantify forecasts and compare forecasts to outcomes;
7. To learn – how to read evidence and assess whether the claim $x$ caused $y$ is valid;
8. Understand the cost-benefit approach to decision making;
9. Design pilot tests and experiments: understand key issues involved in conducting and drawing conclusions from experiments;
10. To write a report such that it clearly identifies its contribution and the claimed contribution is appropriate to the evidence presented;
11. To work in teams.

**Values and Attitudes:**

1. To take a worldwide perspective and to be aware of cultural differences. A large research area in behavioural finance concerns the wasteful decisions that derive from local norms, from failing to look beyond one’s own narrow experience and from focusing on local markets. There is also an emerging area of research into culturally sensitive investment products e.g. Shariah compliant annuities.
2. A responsible investor: avoiding waste, bubbles and other market distortions;
3. To be an effective welfare-enhancing regulator; to identify and mitigate parasitic and exploitative product offerings e.g. payment protection insurance, scams that cash-out pensions too soon;
4. To consider the global market in investment possibilities and also in forecasting decisions. Examples of how this will be taught on the program include raising awareness of home bias in investor portfolios; of economies and asset holdings that are “antifragile” and hence grow in value when the rest of the global market is hit by trepidation; and of the cultural contingencies that moderate decision making biases.

**HOW WILL I LEARN?**

You will learn through a combination of lectures, tutorials, seminars, practical labs, role play, presentations and networking.

The MSc Behavioural Decision Making for Finance provides research-led teaching and you will be learning-by-doing throughout.

Teaching in semester 1 covers fundamentals: quantitative skills and core concepts in both finance and in behavioural science.

Teaching in semester 2 develops the toolkit encountered in semester 1 with the core module “Empirical Methods in Finance and Accounting” – a course in time-series quantitative methods.

Mostly however, semester 2 applies the concepts and toolkits encountered in semester 1 to specific areas. You will take modules in “Behavioural Finance” and in “Applications of Behavioral Science to Business” as core modules. Additionally, they will choose an option from amongst several more focused modules on various aspects of finance.

All the above modules will be examined to assess knowledge, but assessments will also include projects in which you will apply the concepts and toolkits to specific questions.

Course reading lists include not only leading textbooks but also introduce you to reading current, high-impact scientific literature in finance, economics, psychology and related fields (such as ABS-listed journals, Science, Nature).

Staff members are leading scholars in economics, finance and decision sciences. They have leading-edge knowledge of theories and methods. Consequently, you will engage with academics who have conducted
outstanding research in these fields. Staff members are also motivated to support the development of generic skills of students, as discussions on how to write essays and the dissertation and how to deal with presentations that will take place.

**WHAT TYPES OF ASSESSMENT AND FEEDBACK CAN I EXPECT?**

*Outline of the assessment methods and approach to be used on the programme.*

**Assessment and Assessment Criteria**

Assessment strategies for assessing “knowledge and understanding”, “subject-specific skills”, and “generic skills” will focus on:

- **Summative assessment** of knowledge and understanding and of subject-specific skills is developed through exams, essays and projects. The final project in particular draws together the learning acquired on the programme: you must present a case in support of a proposed investment portfolio and must do so in a manner that can be understood by the intelligent layperson;
- Formative assessment of knowledge and understanding and of subject-specific skills is developed through practical-oriented exercises applied during classes, including making a pitch to persuade peers of an investment strategy;
- Generic and cognitive skills are developed in parallel with the development of the knowledge and understanding and subject specific skills described above. Assessment considers the evolution of each student in terms of generic skills such as team-work, collaboration, writing and oral skills.

**Feedback on Assessment**

- We will feedforward clear expectations of assignments and common mistakes that have been made in assignments and exams in previous years;
- Written work e.g. essays, projects etc. will be returned to you with written comments, via Canvas;
- Correct quiz answers will be made available to all students;
- Wherever possible, we will use online quizzes through Canvas so that you receive timely feedback. This will also allow us to see if there are some questions that a majority of students have answered incorrectly. In this event we will talk through the incorrect answer.

**Assessment Regulations**

No exceptions to the assessment regulations for this programme.

**WHAT WILL I STUDY?**

Total year 1 credit value = **180**

Compulsory credits = **170**

Option credits = **10**

**Compulsory Modules**

<table>
<thead>
<tr>
<th>Module Title</th>
<th>Module Code</th>
<th>Credit</th>
<th>Semester</th>
<th>SCQF Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioural Economics I: Concepts and Theories</td>
<td>BSMP001</td>
<td>20</td>
<td>Autumn</td>
<td>11</td>
</tr>
<tr>
<td>Corporate Finance</td>
<td>INVP001</td>
<td>20</td>
<td>Autumn</td>
<td>11</td>
</tr>
<tr>
<td>Quantitative Methods in Finance</td>
<td>BFIP012</td>
<td>20</td>
<td>Autumn</td>
<td>11</td>
</tr>
<tr>
<td>Business and Finance Applications of Behavioural Science</td>
<td>BSMP008</td>
<td>10</td>
<td>Spring</td>
<td>11</td>
</tr>
<tr>
<td>Evidence-based Decision Making</td>
<td>BSMP007</td>
<td>20</td>
<td>Spring</td>
<td>11</td>
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<td>Behavioural Finance</td>
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<td>10</td>
<td>Spring</td>
<td>11</td>
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<tr>
<td>Empirical Methods in Finance and Accounting</td>
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<td>10</td>
<td>Spring</td>
<td>11</td>
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<tr>
<td>Research Project</td>
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<td>60</td>
<td>Summer</td>
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Option Modules – 1 from:

<table>
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<tr>
<th>Module Title</th>
<th>Module Code</th>
<th>Credit</th>
<th>Semester</th>
<th>SCQF Level</th>
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<tr>
<td>Investments: Equity Portfolio and Pricing</td>
<td>INVP012</td>
<td>10</td>
<td>Spring</td>
<td>11</td>
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<tr>
<td>Investments: Fixed Income and Alternative Investments</td>
<td>INVP013</td>
<td>10</td>
<td>Spring</td>
<td>11</td>
</tr>
<tr>
<td>International Corporate Finance</td>
<td>FINP013</td>
<td>10</td>
<td>Spring</td>
<td>11</td>
</tr>
<tr>
<td>Mergers and Acquisitions</td>
<td>FINP014</td>
<td>10</td>
<td>Spring</td>
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Key Features of the Programme *(including what makes it distinctive)*

The program draws together two strengths of SMS, behavioural science and finance. Of all UK Masters program in finance and decision making, this program provides a uniquely rich evidence base on how psychological biases distort markets for financial products. It also equips you with a means to develop and test theories yourself. This last learning outcome will be tested by the end of program project: to design a behaviourally-informed investment portfolio and test its performance with quantitative techniques.

In semester 1, we teach you how investors should behave if they wish to maximize portfolio growth. We also give you a grounding in behavioural theories that predict deviations from that optimal investment strategy.

In semester 2, we equip you with the tools to develop and test your own theories of bias in financial decision making.

READING LIST

Required and Recommended Reading for the Programme:

We recommend that prospective students read


Section 3 Student Support

SUPPORT FOR STUDENT LEARNING

**Induction**

You will take part in the Flying Start Leadership Program. The University of Stirling Management School’s innovative Flying Start Leadership Programme engages postgraduate students in a wide range of activities at the beginning of their Course which challenges their perspectives of culture, explores their beliefs and values, builds their self-confidence, and encourages them to share their ideas.

**Programme overview**

During the first two weeks of your studies, you are introduced to the tools and skills which enhance your understanding of self, thereby empowering them to set goals and make informed decisions.

By participating in the Programme you will:

- discover more about the exciting period of learning ahead and the expectations of their Course;
- develop and enhance levels of self-awareness to cope, work under-pressure, and manage conflict;
- discover more about their own personal goals and objectives at the outset of their studies in relation to future career aspirations;
- develop cultural intelligence and understanding of diversity of attitudes and behaviours, so that they can work responsibly in a global business environment;
- understand what it takes to work as part of a successful team enabling them to confidently lead any situation in the future;
• develop business presentation skills and improve public speaking skills;
• improve time management skills that are applicable to any business environment;
• build new friendships, and discover all that the University campus and the vibrant city of Stirling has to offer.

The Take-Off Conference
The Flying Start activities equip you with the skills to understand self and apply these throughout your studies. In addition, during the Spring semester, you are encouraged to consider your next step by attending The Take-Off Conference. This one-day School-wide career management conference offers you a unique opportunity to prepare yourself for launch into the world of employment.

Study Skills Support
Student Learning Services are committed to providing comprehensive guidance on all aspects of effective and efficient learning. The ultimate aim of the service is to enable you to make the most of your academic studies at the University and for you to become an independent, successful learner during your time at the University of Stirling. This is facilitated through collaborative work with experienced tutors and by offering a variety of courses, workshops and tutorials.

All students, whatever stage of their academic studies, are welcome to use Student Learning Services.

However the service may be particularly beneficial:
• In your first two years of study.
• If you are making the transition from college to Higher Education.
• If you have been out of education for some time.

What we are able to do:
• Advise you on academic skills relevant to your studies at University.
• Help you consolidate your previous learning and develop new learning strategies.
• Advise on action-plans to potentially improve grades.
• Suggest practical solutions if you feel overwhelmed by assignment work.
• Help you gain confidence in the transition to Higher Education.

More information can be found here: http://www.stir.ac.uk/campus-life/learning-support/student-learning-services/

STEER is a University-wide Student Peer Support Scheme providing Mentors or Buddies for any Undergraduate or Taught Postgraduate student in their first year at the University of Stirling. The scheme aims to help you make the most of your time at the University and enable you to settle in as quickly as possible. More information can be found here: http://www.steer.stir.ac.uk/index.php

Academic and Pastoral Support
Adviser of Studies: Advisers have an important role to play in enhancing your academic and personal development and are essential to ensuring you make the most of your time at university. Advisers provide a personalised point of contact for you to discuss academic concerns or queries within the academic community. The general purpose of the role is to provide more in-depth advice on the academic options available to you and on the academic policies and regulations within the University. More information can be found here: http://www.stir.ac.uk/registry/advisers/

Personal Tutor: The role of a personal tutor is to help you feel part of the University community. They are a specific and consistent source of guidance, information and support for you throughout your studies. The tutor should be the your first formal point of contact for general academic guidance and pastoral support. More information can be found here: http://www.stir.ac.uk/tse/personal-tutor/

Support and Wellbeing: At university you may face non-academic issues where you need some expert help or guidance. There are lots of ways we can help you in your day-to-day life at University. Student Support
Services provide a range of high-quality services to assist you during the course of your studies, help prepare you for life after graduation. We aim to enhance the student experience and help you to get the most out of your time at University. More information can be found here: [http://www.stir.ac.uk/campus-life/support-and-wellbeing/](http://www.stir.ac.uk/campus-life/support-and-wellbeing/)

**Student Union:** you can also access support through the Students’ Union, more information can be found here: [https://www.stirlingstudentsunion.com/representation/studentsupport/](https://www.stirlingstudentsunion.com/representation/studentsupport/)

**Accessibility and Inclusion**
We are committed to offering a service which is welcoming and supportive of the needs of all students. Our service takes into account the full range of needs you may have, in a wide variety of circumstances including - physical and mobility difficulties, sensory impairments, specific learning difficulties including dyslexia and autistic spectrum disorder as well as medical conditions and mental health difficulties. We can also support you if you have short-term, temporary impairments or other difficulties as a result of an accident, injury, illness or surgery. More information can be found here: [http://www.stir.ac.uk/student-support/accessibility-&-inclusion-service/](http://www.stir.ac.uk/student-support/accessibility-&-inclusion-service/)

**Learning Resources**
You can find out more about the resources available to support your learning here: [http://www.stir.ac.uk/campus-life/learning-support/](http://www.stir.ac.uk/campus-life/learning-support/)

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**Section 4 Programme Evaluation and Enhancement**

**METHODS FOR EVALUATING AND IMPROVING THE QUALITY AND STANDARDS OF TEACHING AND LEARNING**

**Module Evaluation**
Module evaluations are carried out each year and are an important way of getting student feedback on the modules we teach. The University introduced a new programme of module evaluations in 2015 using the EvaSys system. We aim to evaluate every module we teach in every semester. You can find out more here: [http://www.stir.ac.uk/registry/studentinformation/moduleevaluation/](http://www.stir.ac.uk/registry/studentinformation/moduleevaluation/)

**Student/Staff Consultative Committees (SSCC)**
Student/Staff Consultative Committees will meet twice per semester, and shall routinely address issues arising from student feedback on modules, the programme, as well as broader issues on academic policy.

**Module Review**
At the end of each semester, each Module Co-ordinator will complete a Module Review Form, which will highlight issue, how these were resolved, and areas of good practice.

**Annual Programme Monitoring Review**
Annual Programme Monitoring Review Forms will be completed at the end of each academic cycle. This is an opportunity for the Programme Director and the wider teaching team to review the programme. This includes a review of SSCCs minutes; feedback from the External Examiner; a review of all modules (strengths and areas of good practice, issues, responses); the range of assessment in the programme; the continuing appropriateness of the curriculum; adequacy of learning resources; quantity and quality of professional placements (if applicable); professional accreditation (if applicable); the effectiveness of changes implemented since the previous report; and outline any proposed changes for future cohorts.

**Postgraduate Taught Experience Survey (PTES)**
A nationally recognised survey commissioned by the Higher Education Academy, we use the PTES survey to better understand our students’ experiences and to identify areas for improvement.

**Programme Review**
Programmes are reviewed annually and on a 5 yearly cycle. You can get involved in a variety of different ways; by completing module evaluations, becoming a course representative and attending Student Staff Consultative Committees, or participating in the review process itself. You can find out more here: http://www.stir.ac.uk/academicpolicy/handbook/review-and-monitoring/

**External Examiner(s) (To be added following Stage 2 approval)**
Name of External Examiner: t.b.c.
Institution: t.b.c.
*Please add as required.*

### Section 5 My Future

**WHAT KIND OF CAREER MIGHT I GO ON TO?**

What career avenues does this qualification open up to the student?

Our training will make our students attractive to investment banks, stockbrokers, FinTech, insurance companies, personal financial advisors and financial regulators. The behavioural aspect of the qualification will especially appeal to employers who:

a) wish to find arbitrage opportunities (i.e. value) in the financial markets
b) need to forecast consumer response to products
c) want to design financial products so as they provide a win-win for producer and customer e.g. the [Save More Tomorrow pension](#)
d) wish to anticipate “unanticipated consequences” of regulatory change e.g. [the Pensions Freedom reforms of 2015](#)
e) want to cultivate a relationship with their clients based on trust and clear communication

**WHAT STUDY ABROAD OPPORTUNITIES ARE AVAILABLE?**

None

**WHAT PLACEMENT OPPORTUNITIES ARE AVAILABLE?**

We will develop consulting projects with our corporate contacts (e.g. Prudential, Bank of Ireland, and Irrational Insights) which we will support students in pursuing as dissertation topics.

**WHAT FURTHER STUDY OPTIONS ARE AVAILABLE TO ME?**

What programmes of study could the student go on to after successfully completing this one?

PhD research

**WHAT OTHER INFORMATION DO I NEED TO KNOW?**

Information that should be displayed at module registration and/or on the Degree Programme Table webpages to help students understand any programme specific requirements or agreed exceptions to regulations. This could also include useful information that will enable a student to decide to take this programme, prepare for the programme, or that will be useful to them on completion of the programme e.g. professional recognition/accreditations etc.

The course includes an innovative week-long global financial trading and training boot camp run by our partner Amplify Trading, which won the CFA Institute’s Innovative Delivery of Education (IDEA) Award in 2015. Students trade futures contracts on the Chicago Mercantile Exchange (CME) using University of Stirling computer labs on which Amplify Trading’s bespoke software links to live CME market prices through the Internet. By enabling students to trade in real time, but with virtual money, the Boot Camp bridges the gap between an academic understanding of financial markets and how they function in practice.

Students will actively participate in managing a portion of the university’s endowment according to
behavioral principles. Another group of finance students will be managing a portion of the fund using standard theories. We will then compare the performance of the two portfolios at the end of the year. This friendly competition should motivate students to think through the implications of theories in a critical way.

Students will have access to databases including Eikon (Reuters); Datastream; PrivCo; S&P Capital IQ.

They will also have access to a Bloomberg trading terminal.

Section 6 Admissions

HOW DO I ENTER THE PROGRAMME?

Admissions Criteria

IELTS - 6.5 (6.0 in speaking & listening; 6.5 in reading & writing) (specifically for TESOL courses).

A minimum of a second class honours degree or equivalent. Applicants without these formal qualifications but with significant appropriate/relevant work experience are encouraged to apply.

Version: 1
Date Version Approved: 30.11.17
For use from: 30.11.17