

Programme Information		
Programme Title	Programme Code	HECoS Code
Risk Management and Financial Engineering	N34G	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
MSc	1 calendar year (12 months)	Full Time	Annually in September	90	180

Ownership			
Awarding Institution	Imperial College London	Faculty	Imperial College Business School
Teaching Institution	Imperial College London	Department	Imperial College Business School
Associateship	Diploma of Imperial College (DIC)	Main Location(s) of Study	South Kensington Campus

External Reference	
Relevant <a href="#">QAA Benchmark Statement(s)</a> and/or other external reference points	Master's Degrees in Business and Management
<a href="#">FHEQ Level</a>	Level 7
<a href="#">EHEA Level</a>	2nd Cycle

External Accrator(s) (if applicable)			
External Accrator 1:	<a href="#">EQUIS</a>		
Accreditation received:	2006	Accreditation renewal:	2025
External Accrator 2:	<a href="#">AACSB International</a>		
Accreditation received:	2012	Accreditation renewal:	2028
External Accrator 3:	<a href="#">Professional Risk Managers' International Association (PRMIA)</a>		
Accreditation received:	Annually	Accreditation renewal:	Annually

Collaborative Provision			
Collaborative partner	Collaboration type	Agreement effective date	Agreement expiry date
N/A	N/A	N/A	N/A

<b>Specification Details</b>	
Programme Lead	Dr Lara Cathcart
Student cohorts covered by specification	2023-24 entry
Date of introduction of programme	October 06
Date of programme specification/revision	July 23

## **Programme Overview**

The programme is run by Imperial College Business School and commences in September with examinations taking place at the end of each term.

In summary, the Programme comprises 10 taught units (6 compulsory\* modules and 4 electives\*\*) and the Applied Project or 9 taught units (6 compulsory modules and 3 electives) and an Individual Research Project.

You will also undertake a compulsory module in Foundations in Risk Management & Financial Engineering in September which you must pass successfully.

In addition, there is an on-line Accounting Primer, an online Ethics & Professional Standards in Finance module, an online Finance Careers Primer and a Career & Professional Development module. These modules do not, however, contribute to the calculation of the final award.

You will devote the summer term and the normal summer vacation period to working on your Project. You will be assessed by an individual Applied Project of 3,000 words and a short presentation. If you are on an approved work placement, you may, with the Academic Director's approval, write a report which incorporates the learning from your placement. As an alternative to the Applied Project, you can, with permission from the Academic Director, write an individual Research Project which is an original piece of work not exceeding 10,000 words. Completion of a Research Project will require you to take one less elective. The Research Project is particularly suited to those wanting to do a PhD after their MSc programme.

You may also take the optional online modules Introduction to Maths and C++.

Graduates from this programme typically progress to careers in; asset/ investment management, investment banking, consulting, risk management, sales/ trading, quant and financial engineering, general finance, fintech, banking, insurance and private equity.

\*Compulsory modules are those which are designated as necessary to be taken as part of the programme syllabus. Compulsory modules can be compensated.

\*\* Elective modules are those which are in the same subject area as the field of study and are offered to students in order to offer an element of choice in the curriculum and from which students are able to select. Elective modules can be compensated.

## **Learning Outcomes**

The programme aims to provide quantitative and analytic skills that enable students to embark on a quant-oriented career in the financial services sector or to pursue further academic study (doctoral research).

Students who complete the programme successfully will be able to:

1. Demonstrate a detailed knowledge of fundamental finance theories and models including their derivation and their use and context in the measurement and management of risk;
2. Apply mathematical tools to complex financial problems relating to risk measurement, risk management and risk pricing;
3. Use a range of programming tools to develop live implementations of financial models and use these implementations in practice;
4. •Analyse and evaluate investment decisions and data — students should be able to apply econometric theory and software to draw valid conclusions about data.

The Imperial Graduate Attributes are a set of core competencies which we expect students to achieve through completion of any Imperial College degree programme. The Graduate Attributes are available at: [www.imperial.ac.uk/students/academic-support/graduate-attributes](http://www.imperial.ac.uk/students/academic-support/graduate-attributes)

### Entry Requirements

Academic Requirement	<p>Normally an Upper Second Class Honours Degree (or international equivalent) in a highly quantitative discipline such as Mathematics, Engineering, Science or Economics.</p> <p>The Business School does not award credit for Prior Learning (Recognition of Prior Certified Learning (RPCL) or Recognition of Prior Experiential Learning (RPEL)).</p>
Non-academic Requirements	<p>When selecting candidates, the School uses a range of criteria: academic ability, future potential, and the commitment which students will bring to the programme. Candidate should have a well-researched career plan with clear short and long term goals.</p> <p>Two references are also required.</p>
English Language Requirement	<p><u>Higher requirement</u> IELTS score of 7.0 overall (minimum 6.5 in all elements).</p>
Admissions Test/Interview	<p>Students are required to take an online interview via the Kira Talent platform. All interviews are reviewed and scored as part of the Admissions process.</p>

The programme's competency standards documents can be requested from the Business School's Education Quality Office.

### Learning & Teaching Approach

#### Learning and Teaching Delivery Methods

- Lectures
- Practical classes
- Equipment/technique demonstrations (e.g. Bloomberg,)
- Seminars
- Workshops
- Case studies
- Group work exercises
- Formal presentations
- Pre-programme on-line modules
- On-line discussion forums
- On-line lecture materials
- Interactive content including video and module quizzes
- Work Placement Opportunity

Please refer to the Teaching Toolkit for advice on learning and teaching approaches: <https://www.imperial.ac.uk/staff/educational-development/teaching-toolkit/>

#### Overall Workload

Your overall workload consists of face-to-face sessions and independent learning. While your actual contact hours may vary according to the optional modules you choose to study, the following gives an indication of how much time you will need to allocate to different activities at each level of the programme. At Imperial, each ECTS credit taken equates to an expected total study time of 25 hours. Therefore, the expected total study time is 2250 hours per year.

Depending on the elective modules selected, you may spend approximately 20% of your total study hours on lectures, seminars and similar, and around 80% of your time on independent study.

Assessment Strategy
Assessment Methods
<p>Modules will be assessed by one or more of the following types of assessment methods:</p> <ul style="list-style-type: none"> <li>• Essays</li> <li>• Continuous assessments</li> <li>• Written Examinations/Tests</li> <li>• Multiple Choice Tests</li> <li>• Formal Presentations</li> <li>• Reports</li> <li>• Case Studies</li> <li>• Participation</li> </ul> <p>Assessed modules comprise coursework that is designed to help you master key elements of the subject and, in part, to help prepare you for the final assessment, which is typically a report or examination. Examinations are scheduled throughout the year, generally at the end of the term the module is taught or at the start of the subsequent term. Exact timings are detailed in the programme overview section above. The format of examinations may be written, computer-based or timed remote assessment.</p> <p>Coursework weighting varies among modules. The various assessments allow you to demonstrate that you have met the intended learning outcomes for each module and these collectively contribute towards your achievement of the programme's learning outcomes, detailed above.</p> <p>Assessments are designed to ensure that you have acquired the core knowledge and skills expected of a Business School graduate and that you are able to apply these in your career aspirations upon completion of the programme.</p>
Academic Feedback Policy
<p>Feedback can take many forms. During lectures and classes, you will receive verbal feedback on the ideas that you contribute to discussions and on in-class presentations. The online teaching materials contain exercises with built-in, immediate, feedback that is received when you submit an answer.</p> <p>The School aims to provide feedback on coursework within two weeks. This will be sent in written form to the individual or the group, as appropriate. Academic staff may also provide verbal feedback of a general nature in class or posted to our virtual learning environment. Office hours offered on all modules also provide an opportunity for individual feedback.</p> <p>The School aims to provide provisional examination grades twenty-five days from the end of the examination period. General feedback to the cohort is provided on examination performance, usually in written form. If you need to resit an examination you may also approach the module leader for feedback on your performance in the first sitting.</p> <p>You will be provided with a percentage grade for coursework and examinations with the final numerical mark only confirmed after the Board of Examiners Meeting and then released by Registry. Grades received during the year are deemed provisional until confirmed by the Final Board of Examiners.</p> <p>The College's Policy on Academic Feedback and guidance on issuing provisional marks is available at: <a href="http://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/">www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/</a></p>
Re-sit Policy
<p>The College's Policy on Re-sits is available at: <a href="http://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/">www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/</a></p>
Mitigating Circumstances Policy
<p>The College's Policy on Mitigating Circumstances is available at: <a href="http://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/">www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/</a></p>

Additional Programme Costs		
This section should outline any additional costs relevant to this programme which are not included in students' tuition fees.		
Description	Mandatory/Optional	Approximate cost
Costs related to the international electives	Optional- if international elective is selected	£1000 - £1500* *exact costs vary by location

**Important notice:** The Programme Specifications are the result of a large curriculum and pedagogy reform implemented by the Department and supported by the Learning and Teaching Strategy of Imperial College London. The modules, structure and assessments presented in this Programme Specification are correct at time of publication but might change as a result of student and staff feedback and the introduction of new or innovative approaches to teaching and learning. You will be consulted and notified in a timely manner of any changes to this document.

Programme Structure					
Year 1 – FHEQ Level 7					
You will study all compulsory modules. On the Applied Project route, you must select 4 electives. On the Research Report route, you must select 3 electives.					
Code	Module Title	Core/ Compulsory/ Elective	Group*	Term	Credits
BUSI70070	Plagiarism Awareness	Required		Sept	0.00
BUSI97176	Ethics and Professional Standards in Finance	Required		SU	0.00
BUSI97592	Foundations in Risk Management & Financial Engineering	Compulsory		Sept	7.50
BUSI97151	Empirical Finance: Methods & Applications	Compulsory		SP	7.50
BUSI97149	Financial Engineering	Compulsory		SP	7.50
BUSI97138	Financial Statistics	Compulsory		AU	7.50
BUSI97141	Investments and Portfolio Management	Compulsory		AU	7.50
BUSI97148	Risk Management and Valuation	Compulsory		SP	7.50
BUSI97144	Stochastic Calculus for Finance	Compulsory		AU	7.50
BUSI97143	Advanced Financial Statistics	Elective	A	SU	7.50
BUSI97042	Advanced Options Theory	Elective	A	SU	7.50
BUSI97075	Applied Trading Strategies	Elective	A	SU	7.50
BUSI97059	Asset Allocation & Investment Strategies	Elective	A	SP	7.50
BUSI97069	Banks, Regulation & Monetary Policy	Elective	A	SU	7.50
BUSI97066	Big Data in Finance I	Elective	A	SP	7.50
BUSI97541	Big Data in Finance II	Elective	A	SU	7.50
BUSI97595	Blockchain and Applications	Elective	A	SP	7.50
BUSI97799	Climate Finance	Elective	A	SU	7.50
BUSI97153	Computational Finance with C++	Elective	A	SU	7.50
BUSI70098	Corporate Finance for Practitioners (International Elective)	Elective	A	SU	7.50
BUSI97604	Shareholder Activism and Corporate Responsibility	Elective	A	SU	7.50
BUSI97050	Credit Risk	Elective	A	SU	7.50
BUSI97156	Enterprise Risk Management	Elective	A	SU	7.50
BUSI97606	Entrepreneurial Finance	Elective	A	SU	7.50
BUSI97044	Fixed Income Securities	Elective	A	SU	7.50

BUSI97157	Insurance	Elective	A	SU	7.50
BUSI97045	International Finance	Elective	A	SP	7.50
BUSI97067	Introduction to Quantitative Investing (International Elective)	Elective	A	SU	7.50
BUSI97068	Innovation and Strategy in Fintech	Elective	A	SU	7.50
BUSI97608	Machine Learning & Finance	Elective	A	SU	7.50
BUSI70326	Market Microstructure: Trading and Liquidity	Elective	A	SU	7.50
BUSI97064	Real Estate Investment, Finance and Private Equity	Elective	A	SU	7.50
BUSI97139	Structured Credit and Equity Products	Elective	A	SU	7.50
BUSI97605	Text Mining for Economics and Finance	Elective	A	SP	7.50
BUSI70444	Sustainable Finance Investment	Elective	A	SU	7.50
BUSI97063	Wealth Management & Alternative Investments	Elective	A	SU	7.50
BUSI97142	Applied Project	Elective	B	SU/SUP	7.50
BUSI97154	Applied Project (Work Placement)	Elective	B	SU/SUP	7.50
BUSI97137	Project	Elective	B	SU/SUP	15.00
Credit Total					90

## Progression and Classification

### **Award and Classification for Postgraduate Students**

#### **Award of a Postgraduate Degree (including MRes)**

To qualify for the award of a postgraduate degree a student must have:

1. accumulated credit to the value of no fewer than 90 credits at level 7;
2. and no more than 15 credits as a Compensated Pass;

#### **Classification of Postgraduate Taught Awards**

The College sets the class of Degree that may be awarded as follows:

1. Distinction: 70.00% or above.
2. Merit: 60.00% or above but less than 70.00%.
3. Pass: 50.00% or above but less than 60.00%.

For a Masters, your classification will be determined through the Programme Overall Weighted Average meeting the threshold for the relevant classification band.

Your degree algorithm provides an appropriate and reliable summary of your performance against the programme learning outcomes. It reflects the design, delivery, and structure of your programme without unduly over-emphasising particular aspects.

### Programme Specific Regulations

N/A



## Supporting Information

The Programme Handbook is available at: [www.imperial.ac.uk/business-school/programmes/programme-information/](http://www.imperial.ac.uk/business-school/programmes/programme-information/)

The Module Handbook is made available via the Hub once the module commences. Module descriptions are available in the Programme Handbook (link above).

The College's entry requirements for postgraduate programmes can be found at: [www.imperial.ac.uk/study/apply/postgraduate-taught/entry-requirements/](http://www.imperial.ac.uk/study/apply/postgraduate-taught/entry-requirements/)

The College's Quality & Enhancement Framework is available at: [www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance](http://www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance)

The College's Academic and Examination Regulations can be found at: [www.imperial.ac.uk/about/governance/academic-governance/regulations](http://www.imperial.ac.uk/about/governance/academic-governance/regulations)

Imperial College is an independent corporation whose legal status derives from a Royal Charter granted under Letters Patent in 1907. In 2007 a Supplemental Charter and Statutes was granted by HM Queen Elizabeth II. This Supplemental Charter, which came into force on the date of the College's Centenary, 8th July 2007, established the College as a University with the name and style of "The Imperial College of Science, Technology and Medicine".  
[www.imperial.ac.uk/admin-services/secretariat/college-governance/charters/](http://www.imperial.ac.uk/admin-services/secretariat/college-governance/charters/)

Imperial College London is regulated by the Office for Students (OfS)  
[www.officeforstudents.org.uk/advice-and-guidance/the-register/](http://www.officeforstudents.org.uk/advice-and-guidance/the-register/)

**This document provides a definitive record of the main features of the programme and the learning outcomes that you may reasonably be expected to achieve and demonstrate if you take full advantage of the learning opportunities provided. This programme specification is primarily intended as a reference point for prospective and current students, academic and support staff involved in delivering the programme and enabling student development and achievement, for its assessment by internal and external examiners, and in subsequent monitoring and review.**