Programme Information		
Programme Title	Programme Code	HECoS Code
BSc Economics, Finance and Data Science	L1N3	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
BSc	3 Academic Years	Full-time	Annually in October	180	360
DipHE	N/A	N/A	None – exit award only	120	240
CertHE	N/A	N/A	None – exit award only	60	120
You must apply to and join the BSc. The DipHE and CertHE are exit awards and are not available for entry.					

Ownership			
Awarding Institution	Imperial College London	Faculty	Imperial College Business School
Teaching Institution	Imperial College London	Department	Imperial College Business School
Associateship	N/A	Main Location(s) of Study	South Kensington Campus & White City Campus
External Reference			
Relevant QAA Benchmark Statement(s) and/or other external reference points		QAA Subject Benchmark Statements: Economics Finance Computing UK external reference points: BSc Economics (LSE) BSc Finance (LSE) BSc Data Science (LSE) BSc Computer Science and Economics (St Andrews) BA Economics (Cambridge)	
FHEQ Level		BSc Levels 4-6	
EHEA Level		1st Cycle	
External Accreditor(s) (if applicable)			
External Accreditor 1:	EQUIS		
Accreditation received:	2006	Accreditation renewal:	2030

External Accreditor 2:	AACSB International		
Accreditation received:	2012	Accreditation renewal:	2028
Collaborative Provision			
Collaborative partner	Collaboration type	Agreement effective date	Agreement expiry date
N/A	N/A	N/A	N/A
Specification Details			
Programme Lead		Dr Pedro Rosa Dias	
Student cohorts covered by specification		2025-26 entry	
Date of introduction of programme		October 23	
Date of programme specification/revision		October 25	

Programme Overview

The BSc Economics, Finance and Data Science is set against the backdrop of increasing demand for graduates with academic training in economics and finance whose analytical skills are complemented with knowledge of data science and coding capabilities. Whilst economics and finance form the basis of rigorous undergraduate programmes in leading institutions across the sector, these have not historically included the study of data science as part of the curriculum, leaving graduates to develop these skills independently.

The BSc Economics, Finance and Data Science degree draws on the academic expertise of all Departments in Imperial College Business School (Economics and Public Policy; Finance; Analytics, Marketing and Operations; Management and Entrepreneurship) to offer you the rigorous study of economics and finance, enriched through the study of data science and its applications within these disciplines. A further dedicated sequence of modules develops the essential skills identified by employers.

Through the study of economics you will analyse how households, firms and governments behave and interact to determine income, wealth and well-being, and hence inform both business decisions and public policy design. Years 1 and 2 include a theoretical exploration at the individual level through compulsory Microeconomics modules, and at the aggregate level through compulsory Macroeconomics modules. The importance of evaluating frameworks against an evidence base is emphasised throughout, requiring you to engage in quantitative data analysis.

Through the study of finance you will develop a core understanding of financial markets, financial institutions as well as the design of financial instruments. In Accounting, you will construct and interpret financial statements, while in Corporate Finance, you explore how firms can maximise value through financing and investment decisions, paving the way to finance options in Year 3.

Both finance and economics interact heavily with mathematical and statistical methods. Through compulsory Econometrics modules, you develop an in-depth theoretical understanding of empirical methods relevant to economics and finance, alongside key applications enhanced by the study of data science. You will learn to programme from the outset, which alongside modules in Machine Learning, Databases and Cloud Computing, will offer the tools with which to address a wide range of empirical questions, using both small and large datasets.

The core curriculum is further enhanced by a cross-cutting module designed to develop skills identified as essential by employers, such as strong communication and presentation skills (e.g. the ability to communicate ideas visually and verbally), effective teamwork in diverse organisations, critical thinking, design thinking and a

creative mindset to problem solving. It integrates a new type of management skills training focused on Leadership, Ethics, Awareness, Diversity and Societal Impact (LEADS).

In your final year, you will be able to choose from specialist electives in Economics, Finance, Data Science. These reflect the broad scope of expertise within the Business School, in areas such as health, energy and climate change. The final year structure is sufficiently flexible to allow you to specialise in either of the three fields through appropriate selection of Year 3 modules, so as to enable access to leading Masters programmes in either of the three disciplines. You can also continue with a mix of electives across the three areas of study if preferred.

Learning Outcomes

Upon successful completion of FHEQ Level 4 of BSc Economics, Finance, and Data Science programme students will:

- Comprehend a range of microeconomic concepts and modelling frameworks and be able to competently apply them to analyse a range of decision problems of consumers and firms, using appropriate quantitative methods, and to evaluate the effects of economic policy on decisions and outcomes.
- Structure and solve economic and finance problems in mathematical format, as well as to interpret these mathematical solutions in terms of their "real world" economic context. Understand and utilise statistical inference to in the context of economics and finance, including probability distributions, confidence intervals, hypothesis testing and correlation analysis.
- Develop programming skills and the ability to "data wrangle" and visualise data. Understand and implement some commonly used data structures.
- Demonstrate knowledge and understanding of core macroeconomic, accounting and financial concepts and principles with reference to real life applications. Use basic statistical and computational techniques (e.g. using R or Python) to produce and analyse macroeconomic, financial and accounting data and apply basic problem-solving skills and mathematical techniques to analyse basic macroeconomic and financial models.
- Develop intellectual, cognitive and transferable skills such as communication and analysis of data, theory and evidence.
- Develop the ability to articulate ideas and concepts visually and verbally, embracing uncertainty and seeking new opportunities by exploration and experimentation. Explore how to communicate and perform effectively within a team and within an organisation.

Upon successful completion of FHEQ Level 5 of BSc Economics, Finance, and Data Science programme students will:

- Comprehend microeconomic modelling frameworks that relate to the interaction of decision-makers within a market and otherwise and be able to appropriately apply these to different contexts and to evaluate policy issues, interpret analytical findings, and critically evaluate these against relevant evidence.
- Demonstrate understanding of causal inference and the ability to apply econometric methods in the context of economics and finance, including randomised experiments, matching, regression analysis, instrumental variables and two-stage least squares, as well panel data and time series analysis.
- Formulate and solve different classes of optimisation problems via software. Demonstrate ability to run Monte-Carlo simulation. Understand core problems of machine learning (supervised and unsupervised learning) and to implement standard algorithms from ML. Demonstrate knowledge of data-base theory and different approaches to storing data.
- Recognise and explain the importance and practical implications of risk and uncertainty in macroeconomics and finance. Define and describe a selection of basic dynamic macroeconomic and financial models, together with their applications to asset pricing, portfolio choice and macroeconomics. Demonstrate an understanding of corporate financial decisions, such as capital structure and discounted cash flow analysis.
- Apply relevant econometric and computational methods to develop computer code designed to analyse data/models and assess the effectiveness of macroeconomic policies and financial decisions. Further develop intellectual, cognitive and transferable skills, including written and verbal communication.
- Demonstrate the ability to articulate ideas and concepts visually and verbally, embracing uncertainty and seeking new opportunities by exploration and experimentation. Understand how to communicate and

perform effectively within a team and within an organisation.

Upon successful completion of FHEQ Level 6 of BSc Economics, Finance, and Data Science programme students will:

- Have developed knowledge in a number of specialised areas in microeconomics and be able to synthesise and evaluate research literature in these areas, proficiently analyse microeconomic issues using advanced analytical methods and creatively formulate and address research questions pertaining to these areas.
- Demonstrate the ability to use state-of-the-art econometrics and data science methods to address applied problems in economics and finance. This arsenal of methods may encompass panel data (static and dynamic models), fixed and random effects models, the estimation of local average and marginal treatment effects using instrumental variables, GMM, textual analysis and big data.
- Define, describe and compare dynamic macroeconomic and financial models by using appropriate econometric, machine learning and computational methods, to provide economic policy and financial guidance. Apply financial economics to selected topics, such as: asset management, derivatives, risk management, banking and financial intermediation, corporate governance, and dynamic asset pricing.
- Justify, interpret and communicate insights from the evaluation of real-world problems in finance and economics. Transfer the analytical skills developed in the context of economics to other settings. Develop system thinking and apply empathy to define solutions via leadership, ethics, awareness, diversity and societal impact (LEADS).

The Imperial Graduate Attributes are a set of core competencies which we expect students to achieve through completion of any Imperial degree programme. The Graduate Attributes are available at: https://www.imperial.ac.uk/about/education/our-graduates/

Entry Requirements	
Academic Requirement	**A-levels:** A*AA with an A* in Mathematics. Further Mathematics is useful, but not required. Further Mathematics is acceptable for entry in combination with Mathematics and one other A-level from traditional subjects. **IB Diploma:** Minimum **39** points including **7** in Mathematics at higher level, with **6** in two further subjects at higher level. Either Mathematics Analysis and Approaches or the Applications and Interpretation syllabi will be accepted at higher level with no preference **Or equivalent comparable qualifications recognised by the university.**
Non-academic Requirements	N/A
English Language Requirement	Higher requirement (UG) IELTS score of 7.0 overall (minimum 6.5 in all elements)
Admissions Test/Interview	All applicants will be required to take an admissions test. Selected applicants may be invited to an interview, either in person or online.

Exemptions from some Chartered Institute of Management Accountants (CIMA) professional examinations are possible through the Accredited degree accelerated route.

Key CIMA contact:
Jason Nye Manager, Student Recruitment — Management Accounting Association | AICPA | CIMA M: +44 (0) 7595 565 443 jason.nye@aicpa-cima.com
The Helicon, One South Place, London, EC2M 2RB CIMA: cimaglobal.com/Contact-us/

Learning & Teaching Approach

Scheduled Learning & Teaching
You are taught through a combination of lectures, tutorials, as well as computing labs. Tutorials enable you to discuss and apply your understanding of topics covered in lectures in interactive small group sessions. You will develop coding skills through computing lab sessions, which are used in activities and projects throughout the degree.

The Virtual Learning Environment (VLE) serves as a repository for all teaching materials including recordings of all lectures, lecture slides, problem sets etc, while you have the opportunity to interact with your peers and teachers through online discussion forums. Learning technologies support teaching activities, such as in-class polling and online self-diagnostic quizzes.

No one set of teaching and learning activities or methods is uniquely suitable for the study of modules taken on the BSc Economics, Finance and Data Science. The approach to teaching in the Business School is student-focused and our multi-mode approach accounts for the diverse background and aspirations of your cohort. The design of teaching and learning activities will strike the appropriate balance between developing theoretical understanding and experiential learning through applications, enhanced through digital innovation.

Diverse teaching methods will be adopted and enhanced, as appropriate for each discipline and module, through the use of digital media, in-class activities such as classroom games, or flipped teaching approaches. Combined with extra-curricular opportunities and the vibrant environment of the Business School, you can expect an enriching student experience.

Independent Learning
You are expected to spend significant time on independent study outside of in person and online contact time, while supported and guided by academic staff. Independent study is both a crucial determinant of academic performance, as well as important for developing autonomy, self-motivation and self-confidence, all of which prepare you for professional practice where you will be expected to manage your own continued professional development.

You can also expect to spend part of your independent study time interacting with your peers for the development of group projects, as well as working within study groups. This will serve to make the degree experience more engaging, whilst also embedding important teamwork and leadership skills that will prepare you for your professional practice and which are valued by employers.

Independent learning activities that you are expected to undertake will typically include studying teaching and learning resources on the VLE, reviewing lecture recordings and developing notes, working through problem sets, engaging with coding activities, reading books, reports and journal articles, undertaking research, working on individual and group projects, working on coursework assignments and revising for examinations.

Overall Workload
Your overall workload on the BSc Economic, Finance and Data Science consists of scheduled teaching and learning sessions and independent learning.

At Imperial, each ECTS credit taken equates to an expected total study time of 25 hours. Therefore, the expected total study time is 1500 hours per academic year. While contact hours may vary depending on the specific modules taken, you can expect to spend around 25% of study time on lectures, seminars and other scheduled activity (around 400 hours) and around 75% of study time on independent study (around 1100 hours).

Assessment Strategy

Assessment Methods

A variety of assessment methods will assess your understanding. Assessments are grouped as formative and summative.

Formative assessments do not contribute to the module mark but provide information on your progress and are opportunities for feedback and reflection that guides future learning. This enables you to improve your understanding as well as your skills, in order to achieve a better performance in summative assessments, which do count towards module marks. Formative assessments also provide feedback for teaching staff, which enables teaching and assessment to evolve and improve.

Summative assessments are used to assess your learning against the intended module learning outcomes and contribute towards the achievement of the programme learning outcomes, detailed above. There is summative assessment during and/or at the end of each module and these assessments contribute towards mark for each year, and thus towards degree classification.

No one set of assessment methods is uniquely suitable for assessing your learning against learning outcomes for the BSc Economics, Finance and Data Science. You will broadly be assessed through a mix of individual and group coursework activities as well as unseen examinations. While in most modules the weighting of unseen examination constitutes the majority, some modules may be entirely or largely coursework-based.

Examples of assessed Coursework

- Problem sets
- Project reports
- Oral presentations
- Poster presentations

Examples of Examinations

- In class or online tests
- Final unseen examination

Academic Feedback Policy

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.

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.

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.

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.

Imperial's Policy on Academic Feedback and guidance on issuing provisional marks is available at: www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/

Re-sit Policy

Imperial's Policy on Re-sits is available at: www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/

Mitigating Circumstances Policy

Imperial's Policy on Mitigating Circumstances is available at: www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/

Additional Programme Costs

This section should outline any additional costs relevant to this programme which are not included in tuition fees.

Description	Mandatory/Optional	Approximate cost

Our recommendation is to buy a laptop with the following specifications for Windows devices: · Intel i5/i7 CPU · 8/16GB of RAM · 512GB hard drive · 13”/15” screen Mac users can consider the MacBook Pro 13”, 16GB of RAM, 512GB SSD drive. We do not make official recommendations on the specific make of laptops. These specifications are just minimum suggestions, and any more powerful device than these is also suitable.	Optional	Varied

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[1]				
Year 1 – FHEQ Level 4 **You will study all core and compulsory modules.**				
Code	Module Title	Core/ Compulsory/ Elective	Term	Credits
BUSI40001	Mathematical Foundations	Core	AU	7.5
BUSI40002	Probability and Statistics	Core	AU	7.5
BUSI40003	Introduction to Data Science	Core	AU	7.5
BUSI40004	Big Issues in Economics and Finance	Compulsory	AU	5
BUSI40005	Accounting	Compulsory	SP	5
BUSI40006	Microeconomics 1	Compulsory	SP	7.5
BUSI40007	Macroeconomics 1	Compulsory	SP	7.5
BUSI40008	Data Structures and Algorithms	Compulsory	SP	7.5
BUSI40012	Essential Skills 1: Self-awareness and Effective Collaboration	Compulsory	AU	5
			Credit Total	60
Year 2 - FHEQ Level 5 **You will study all compulsory modules.**				
Code	Module Title	Compulsory/ Elective	Term	Credits
BUSI50001	Microeconomics 2	Compulsory	AU	7.5
BUSI50002	Econometrics 1	Compulsory	AU	7.5
BUSI50003	Machine Learning	Compulsory	AU	7.5
BUSI50004	Corporate Finance and Capital Markets	Compulsory	AU	7.5
BUSI50008	Macroeconomics 2	Compulsory	SP	7.5
BUSI50009	Econometrics 2	Compulsory	SP	5
BUSI50005	Operations Research	Compulsory	SP	7.5
BUSI50006	Databases and Cloud Computing	Compulsory	SP	5
BUSI50007	Essential Skills 2: Emotional Intelligence in the Workplace	Compulsory	AU/SP	5

[1] **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.

			Credit Total	60
Year 3 - FHEQ Level 6 **You will select 5 Electives from all academic areas, including specialised in Economics, Data Science or Finance**				
Code	Module Title	Compulsory/ Elective	Term	Credits
BUSI60001	Final Project: Questions and Methods	Compulsory	AU	5
BUSI60002	Final Project: Report	Compulsory	SP&SU	7.5
BUSI60003	Essential Skills 3	Compulsory	AU	5
Various	I-Explore	Compulsory	AU/SP	5 or 7.5
BUSI60047	Behavioural and Experimental Insights	Elective	AU	7.5
BUSI60054	Big Data for Economic Growth and Development	Elective	SP	7.5
BUSI60048	Derivatives and Structured Projects	Elective	SP	7.5
BUSI60049	Development Economics	Elective	SP	7.5
BUSI60050	Financial Engineering and Stochastic Calculus	Elective	AU	7.5
BUSI60051	Investment and Portfolio Management	Elective	SP	7.5
BUSI60052	Mergers, Acquisitions and Private Equity	Elective	AU	7.5
BUSI60004	Industrial Organisation	Elective	SP	7.5
BUSI60007	Health Economics	Elective	AU	7.5
BUSI60011	Advanced Machine Learning	Elective	SP	7.5
BUSI60012	Text Mining in Economics and Finance	Elective	AU	7.5
BUSI60019	Advanced Macroeconomics	Elective	SP	7.5
BUSI60020	Economics and Finance of Climate Change	Elective	SP	7.5
			Credit Total	60-62.5

Important notice: The range of electives available in a given year is dependent on staff availability (influenced by sabbaticals, retirements and resignations). Where possible, you will be given notice of the available options ahead of making module choices.

Progression and Classification

Progression

In order to progress to the next level of study, you must have passed all modules (normally equivalent to 60 ECTS) in the current level of study at first attempt, at resit or by a compensated pass.

The overall weighted average for each year must be 40.00%, including where a module(s) has been compensated, in order for you to progress to the next year of the programme.

Classification

The marks from modules in each year contribute towards the final degree classification.

In order to be considered for an award, you must have achieved the minimum number of credits at the required levels prescribed for that award and met any programme specific requirements as set out in the Programme Specification.

Your classification will be determined through:

i) Aggregate Module marks for all modules
ii) Year Weightings

This is known as the Programme Overall Weighted Average.

For this award, Year One is weighted at 7.50%, Year Two at 35.00% and Year Three at 57.50%.

The university sets the class of undergraduate degree that may be awarded as follows:

i)	First	70.00% or above for the average weighted module results
ii)	Upper Second	60.00% or above for the average weighted module results
iii)	Lower Second	50.00% or above for the average weighted module results
iv)	Third	40.00% or above for the average weighted module results

Programme Specific Regulations

N/A

Supporting Information
The Programme Handbook is available at: https://www.imperial.ac.uk/business-school/programmes/programme-information/
The Module Handbook is available via the Hub once the module commences. Module descriptions are available in the Programme Handbook.
Imperial's entry requirements for postgraduate programmes can be found at: www.imperial.ac.uk/study/pg/apply/requirements
Imperial's Quality & Enhancement Framework is available at: www.imperial.ac.uk/registry/proceduresandregulations/qualityassurance
Imperial's Academic and Examination Regulations can be found at: www.imperial.ac.uk/about/governance/academic-governance/regulations
Imperial College London 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 Imperial's Centenary, 8th July 2007, established Imperial as a University with the name and style of "The Imperial College of Science, Technology and Medicine". www.imperial.ac.uk/admin-services/governance/university-governance-structure/charters/
Imperial College London is regulated by the Office for Students (OfS) 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.