

Programme Information		
Programme Title	Programme Code	HECoS Code
Advanced Chemical Engineering Advanced Chemical Engineering with Biotechnology Machine Learning & Process Systems Engineering	H8U2 H8B2 H8C2	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 October	90	180
PG Certificate – H8U2C / H8B2C / H8C2C	N/A	N/A	N/A	30	60

The Postgraduate Certificate is an exit award that may be offered for all MSc streams at the discretion of the Board of Examiners and is not available for entry. This exit award is not accredited. You must apply to and join one of the MSc streams listed above.

Ownership			
Awarding Institution	Imperial College London	Faculty	Faculty of Engineering
Teaching Institution	Imperial College London	Department	Chemical Engineering
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 Science
<a href="#">FHEQ Level</a>	Level 7
<a href="#">EHEA Level</a>	2nd Cycle

External Accreditor(s) (if applicable)			
External Accreditor 1:	<a href="#">The Institution of Chemical Engineers</a>		
Accreditation received:	2019	Accreditation renewal:	2025

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

Specification Details
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Programme Lead	Dr Salvador Eslava
Student cohorts covered by specification	2025-26 entry
Date of introduction of programme	October 24
Date of programme specification/revision	March 24

## Programme Overview

The MSc offering within the Department of Chemical Engineering is comprised of three programmes which include the MSc Advanced Chemical Engineering degree as well as two additional streams centred on Biotechnology and Machine Learning & Process Systems Engineering. These three programmes showcase and complement the strong teaching and learning and research capacity of the Department and represent key chemical engineering industries which continue to grow and develop in the sector.

The aim of our MSc programmes is to graduate students of the highest quality who will demonstrate technical and professional leadership, and who will go on to successful careers in the chemical engineering industry and other related sectors. You will achieve this aim by developing a strong foundation of chemical engineering fundamentals and the ability to apply these to industrially relevant scenarios. This will help you build sound practical expertise and engineering judgement within these areas.

You will also engage in an active research experience which will help strengthen your independent learning and your ability to put forward innovative solutions using specialist software and our world-class laboratories. This experience will involve you joining one of our research groups to undertake a Research Project that aligns to your interests.

To reflect disciplinary breadth and depth and to complement your core chemical engineering competencies, there will also be a focus on:

- clean technology, green chemistry, waste minimisation and pollution abatement strategies if you study the MSc in Advanced Chemical Engineering (general stream)
- key biotechnology principles related to upstream and downstream bioprocessing if you study the MSc in Advanced Chemical Engineering with Biotechnology
- fundamental modelling, simulation, and optimisation of the process industries if you study the MSc in Machine Learning & Process Systems Engineering.

For each stream, the composition of core, compulsory and elective modules (which includes the opportunity to take one business elective module) has been carefully chosen to reflect disciplinary identity and to strengthen your understanding of chemical engineering. This will result in a well-rounded graduate profile and prepare you to fit seamlessly within numerous graduate destinations.

The programme will also use a variety of learning and teaching methods to help you become an accomplished and independent practitioner, and you are expected to contribute to the discussion with peers, academic and technical staff during your lectures, practical work, and design-based projects. It may be possible for projects to be carried out partly or wholly at an external organisation and requests will be considered on a case by case basis.

As part of an integrated approach, you will also develop your professional and transferable skills which include effective group working, project management, presentation and problem-solving skills as well as competence in oral and written communication. You will also gain a strong awareness of the industrial requirements for ethics, health and safety. This will enhance your employability and set the stage for continued professional development and growth.

We aim to graduate students who are adaptable and well-suited to careers in the industrial, research and service sectors related to chemical engineering. Upon successful completion of your degree, you will therefore be an industry-ready graduate with notable competencies across a wide range of technical and non-technical subjects.

## Learning Outcomes

On successful completion of your programme, you will be able to:

1. Demonstrate a strong fluency of chemical engineering fundamentals and the ability to apply these to industrially relevant scenarios
2. Apply the advanced principles and theory of reaction engineering, separations, transfer processes, process analysis and process design to evaluate and choose a synthetic route for the manufacture of selected chemical products
3. Design and synthesise chemical processes based on chemical engineering concepts using heuristics and mathematical tools
4. Think critically in the context of both open-ended problems and problems with well-defined solutions and develop investigative and modelling strategies to solve them
5. Demonstrate the skills necessary to plan, conduct and report a programme of independent research or a project of direct and immediate industrial relevance
6. Exercise engineering judgement and employ advanced diagnostic, modelling and innovative skills in order to optimise the performance of selected chemical engineering systems
7. Plan, execute and experiments for a variety of industrially relevant problems in order to choose optimal solutions and/or deliver set targets
8. Iteratively design, evaluate and optimise selected chemical engineering systems and processes
9. Apply the ethical, health, safety and sustainability requirements to practical scenarios within the process industries
10. Acquire a range of professional skills and proficiencies including effective communication, team-working, time management and leadership

**In addition, on completion of the MSc in Advanced Chemical Engineering, you will also be able to:**

1. Apply the concepts of sustainability, waste minimisation, clean technology and green chemistry to quantify the environmental impact of selected chemical engineering operations and design optimal strategies for pollution abatement

**In addition, on completion of the MSc in Advanced Chemical Engineering with Biotechnology, you will also be able to:**

1. Apply the main unit operations involved in industrial biotechnology processes to design and simulate selected upstream biotechnological processes
2. Apply conventional downstream separation approaches to solve industrially relevant problems related to bioproduction processes

**In addition, on completion of the MSc in Machine Learning & Process Systems Engineering, you will also be able to:**

1. Mathematically describe, analyse and model a range of dynamic processes prevalent in chemical engineering systems
2. Solve and optimise a range of advanced process operations and dynamic systems including process synthesis and molecular design using relevant mathematical modelling and software packages

**Students exiting with the PG Certificate in Advanced Chemical Engineering will be able to:**

1. Demonstrate a working fluency of chemical engineering fundamentals and the ability to apply these to industrially relevant scenarios
2. Analyse and evaluate the performance of selected chemical engineering systems and be able to make recommendations to optimise their performance
3. Design and synthesise chemical processes based on chemical engineering concepts using heuristics and mathematical tools
4. Think critically and exercise engineering judgement to develop strategies to solve practical engineering problems
5. Apply the ethical, health and safety requirements to practical scenarios within the process industries
6. Communicate effectively through oral presentations and written reports
7. Work effectively in a team and demonstrate effective time-management to achieve an objective under imposed resource constraints

## Entry Requirements

Academic Requirement	Normally a 2.1 UK Bachelor's Degree with Honours in an Engineering, Physical Science, Mathematical, or Life/Biomedical Sciences based subject (or a comparable qualification recognised by the university).  For further information on entry requirements, please go to PG: <a href="http://www.imperial.ac.uk/study/apply/postgraduate-taught/entry-requirements/">www.imperial.ac.uk/study/apply/postgraduate-taught/entry-requirements/</a>
Non-academic Requirements	N/A
English Language Requirement	<a href="#">Standard requirement (PG)</a> IELTS score of 6.5 overall (minimum 6.0 in all elements)
Admissions Test/Interview	N/A

The programme's competency standards documents are available from the department.

### Learning & Teaching Approach

Our MSc Chemical Engineering programmes aim to offer an integrated approach to learning which will allow you to make meaningful connections between the different chemical engineering areas. This will create a more profound and holistic understanding of chemical engineering as you engage in purposeful and relevant learning. Our approach uses a variety of independent study as well as taught, practical and design-based strategies to achieve the programme's learning outcomes.

#### Teaching and practical work

You will be taught using a combination of lectures, tutorials, guest lectures and presentations. Throughout your programme, you will also build your practical expertise through lab-based exercises and software application. Lectures will be delivered using a variety of methods which include traditional style lectures, flipped classroom and online learning supported through pre-recorded lectures. Most lectures and practical work involve student engagement and you are expected to contribute to the discussion with peers, academic and technical staff during your lectures, practical work, and laboratories.

Throughout your programme, you will also build your competency with industry-standard software and modelling packages. These will be introduced within the relevant modules and you will be supported in your learning and proficiency of these by academic staff and Graduate Teaching Assistants.

#### Design-based projects

Design-based projects are used throughout your programme to integrate your chemical engineering knowledge with problem-solving and team-working skills. You will design a number of chemical engineering systems which may include reactors, process control systems and whole-plant systems. These are team-based activities which will require you to work effectively with other team members as you plan, organise, prioritise and produce deliverables.

#### The MSc Research Project

During your programme, you will join one of the Department's research areas (please see the Department's website for more information) to undertake the individual MSc Research Project. The content varies annually, however before the start of term you will be sent a booklet outlining the various research areas on offer by academic supervisors. In the first week of term, you will have the opportunity to attend the Research Area Presentations which is an opportunity for supervisors to outline the research areas that will be on offer for the current academic year.

Supervisor allocations start in October and are normally completed by the end of November, and you will commence work on your research project soon afterwards. Please refer to your MSc Programme Handbook for more details regarding specific milestones and assessment weightings. You will meet regularly with your supervisor to discuss your progress and plan your work. From June onwards, you are expected to work full-time on your research project.

As part of the research project, you will also undertake a bespoke, formal Research Skills training component which has been designed in collaboration with the Imperial College London Early Career Researcher Institute (ECRI), who provide professional skills training for taught and research postgraduate students. This comprises 12

hours of workshops around proposal writing, research ethics, dissertation preparation, presentation skills, poster development, critical thinking, and time management. These 12 hours will be delivered across the year at times when they will best complement your project deliverables.

### **Professional and transferable skills**

Throughout your programme, you will also attend workshops which are designed to increase student collaboration and networking outside of the formal curriculum. This will include a business ethics workshop as well as a dedicated team-building workshop at the start of the academic year to facilitate cohort building and increase team-working efficacy during your group-based projects. You will also undertake a series of professional skills workshops which include communication, CV writing and negotiation to help enhance employability and set the stage for continued professional development and growth.

### **Independent learning**

Students are expected to spend significant time on independent study outside of face-to-face contact time. There is a prerequisite amount of independent study hours for each module which can be augmented based on your needs. This time will typically be used to access allocated reading material, review lecture notes and any related lecture recordings, work on individual and group assignments and coursework as well as to revise for in-class tests and examinations. It is essential that you manage your time effectively to meet your learning needs.

### **Overall Workload**

Your overall workload consists of face-to-face sessions and independent learning. At Imperial, each ECTS credit taken generally equates to an indicative total study time of 25 hours. Therefore, the indicative upper total study time is around 2,250 hours per year. As these are indicative study times, you may need to make reasonable adjustments to these suggested times to account for your individual learning style.

## **Assessment Strategy**

### Assessment Methods

Both summative and formative assessments will be used to demonstrate that you have met the intended learning outcomes for each module leading to an overall fulfilment of the programme learning outcomes.

The goal of summative assessment is to evaluate student learning at the end of an instructional unit, project, module, term or academic year. A variety of summative assessment types will be used throughout your degree programme. Typical examples include final examinations, in-class tests, coursework, laboratory experiments as well as individual and group reports and presentations. Summative assessments are weighted components which count towards your final mark.

The goal of formative assessment is to monitor student learning to provide ongoing feedback that can be used by students to improve their learning and by academic staff to improve their teaching. These assessments are non-weighted elements which are crucial to your learning development as they lead to a better summative performance. Formative assessments help you to identify your strengths and weaknesses as you progress through your modules which can help you to close knowledge gaps and further develop specific areas. Typical examples of formative assessments used include problem sheets, individual and group presentations, drafts of project reports and laboratory experiments, pilot-plant and practical work.

Some assessments in your programme are also non-weighted (called pass/fail elements) where you will need to pass these assessments in order to progress. These kinds of assessments will clearly be identified at the start of your modules.

Self-reflection is also an important part of the feedback and assessment process and you should actively engage with the feedback from your assessments to evaluate your performance. This will help you to improve and further build your competencies.

Based on a typical pathway through the programme, the percentages below provide a breakdown of how you will be assessed in terms of coursework and examinable components:

<b>Coursework</b>	45%
<b>Examination</b>	40%
<b>Practical</b>	15%

<b>Academic Feedback Policy</b>
<p>The department strives to provide timely and rich feedback to students on all coursework. For standard pieces of coursework, the department adheres to Imperial's 10 working-day rule. Larger coursework items (e.g., design or research projects) have longer turn-around times although there is generally ongoing informal and formal feedback from staff within the department which will be provided to you in good time to be actionable for any follow-on or related assessments; these dates will be published in your MSc Programme Handbook.</p> <p>A preliminary Examiners' Meeting is held in July to confer provisional examination marks and research marks to date (which are not formally ratified until the final meeting of the Board of Examiners in October). Some informal feedback on progress can be given to students, including an indication of overall exam performance after the preliminary Examiners' Meeting in July.</p> <p>Solutions to the exam questions are provided on the Virtual Learning Environment, VLE (Blackboard) after the preliminary Examiners' Meeting in July. Students who have failed and are invited to retake the exam in accordance with Imperial regulations are provided with individual feedback.</p> <p>Imperial's Policy on Academic Feedback and guidance on issuing provisional marks to students 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>
<b>Re-sit Policy</b>
<p>In line with Imperial policy, students who are unsuccessful in any of their examinations may normally be allowed an opportunity to re-sit at the discretion of the Board of Examiners. Students are invited to retake the exam in accordance with Imperial regulations are provided with individual feedback.</p> <p>Imperial'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>
<b>Mitigating Circumstances Policy</b>
<p>Imperial'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>

<b>Additional Programme Costs</b>		
This section should outline any additional costs relevant to this programme which are not included in students' tuition fees.		
Description	Mandatory/Optional	Approximate cost
Computer	Optional	Students are offered a laptop on loan.

**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 <sup>1</sup>					
<b>MSc Advanced Chemical Engineering</b> FHEQ Level 7 - You will study all core modules listed below. You should choose a total of 30 ECTS worth of electives from the list below with a maximum of 15 ECTS from the FHEQ Level 6 suite.					
Code	Module Title	Core/ Elective/ Compulsory	Group	Term	Credits
CENG70024	Advanced Process Design	Core		Autumn -Spring	10
CENG70025	Advanced Environmental Engineering	Core		Spring	5
CENG70026	Research Project	Core		Autumn - Summer	45
CENG70010	Advanced Bioprocess Engineering	Elective		Autumn	5
CENG70003	Advanced Optimisation for Chemical Engineering	Elective		Autumn	5
CENG70002	Advanced Process Operations	Elective		Spring	5
CENG70013	Applied Spectroscopy	Elective		Spring	5
CENG70027	Biochemical Engineering	Elective		Spring	5
CENG70035	Carbon Capture and Clean Fossil Fuels	Elective		Autumn	5
CENG70006	Colloids and Interface Science	Elective		Spring	5
CENG70004	Dynamic Behaviour of Process Systems	Elective		Autumn	5
CENG70005	Dynamical Systems in Chemical Engineering	Elective		Autumn	5
CENG70028	Machine Learning for Chemical Engineering	Elective		Autumn	5
CENG70036	Membrane Science and Membrane Separation Processes	Elective		Spring	5
CENG70008	Modelling of Biological Systems	Elective		Spring	5
CENG70012	Molecular Modelling of Fluids	Elective		Autumn	5
CENG70007	Pharmaceutical Process Development	Elective		Autumn	5
CENG70029	Practical Process Engineering in the Oil and Gas Industry	Elective		Autumn	5
CENG70009	Product Characterisation	Elective		Autumn	5

<sup>1</sup> **Core** modules are those which serve a fundamental role within the curriculum, and for which achievement of the credits for that module is essential for the achievement of the target award. Core modules must therefore be taken and passed in order to achieve that named award. **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.

CENG70011	Transport Processes in Biological Systems	Elective		Autumn	5
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### **MSc Advanced Chemical Engineering with Biotechnology**

FHEQ Level 7 - You will study all core modules listed below. You should choose a total of 20 ECTS worth of electives from the list below, with a maximum of 15 ECTS from the FHEQ 6 Level suite.

Code	Module Title	Core/ Compulsory Elective/	Group	Term	Credits
CENG70024	Advanced Process Design	Core		Autumn -Spring	10
CENG70010	Advanced Bioprocess Engineering	Compulsory		Autumn	5
CENG70027	Biochemical Engineering	Compulsory		Spring	5
CENG70008	Modelling of Biological Systems	Compulsory		Spring	5
CENG70026	Research Project	Core		Autumn - Summe r	45
CENG70025	Advanced Environmental Engineering	Elective		Spring	5
CENG70003	Advanced Optimisation for Chemical Engineering	Elective		Autumn	5
CENG70002	Advanced Process Operations	Elective		Spring	5
CENG70013	Applied Spectroscopy	Elective		Spring	5
CENG70035	Carbon Capture and Clean Fossil Fuels	Elective		Autumn	5
CENG70006	Colloids and Interface Science	Elective		Spring	5
CENG70004	Dynamic Behaviour of Process Systems	Elective		Autumn	5
CENG70005	Dynamical Systems in Chemical Engineering	Elective		Autumn	5
CENG70028	Machine Learning for Chemical Engineering	Elective		Autumn	5
CENG70036	Membrane Science and Membrane Separation Processes	Elective		Spring	5
CENG70012	Molecular Modelling of Fluids	Elective		Autumn	5
CENG70007	Pharmaceutical Process Development	Elective		Autumn	5
CENG70029	Practical Process Engineering in the Oil and Gas Industry	Elective		Autumn	5
CENG70009	Product Characterisation	Elective		Autumn	5
CENG70011	Transport Processes in Biological Systems	Elective		Autumn	5



## MSc Machine Learning & Process Systems Engineering

FHEQ Level 7 - You will study all core and compulsory modules listed below. You should choose a total of 10 ECTS worth of electives from the list below or a combination of electives from the list below and a maximum of 10 ECTS from the FHEQ Level 6 suite of electives. Elements of the Introduction to Programming and Python module will also be made available as pre-sessional material at appropriate times to enable prospective students to best prepare for the programme.

Code	Module Title	Core/ Compulsory Elective/	Group	Term	Credits
CENG70038	Introduction to Programming and Python in Chemical Engineering	Compulsory		Autumn	5
CENG70003	Advanced Optimisation for Chemical Engineering	Compulsory		Autumn	5
CENG70002	Advanced Process Operations	Compulsory		Spring	5
CENG70004	Dynamic Behaviour of Process Systems	Compulsory		Autumn	5
CENG70039	Mathematics for Machine Learning and Process Systems Engineering	Compulsory		Autumn	5
CENG70040	Industrial Automation and Autonomous Systems	Compulsory		Autumn	5
CENG70028	Machine Learning for Chemical Engineering	Compulsory		Autumn	5
CENG70026	Research Project	Core		Autumn-Summer	45
CENG70024	Advanced Process Design	Elective		Autumn, Spring	10
CENG70010	Advanced Bioprocess Engineering	Elective		Autumn	5
CENG70025	Advanced Environmental Engineering	Elective		Spring	5
CENG70013	Applied Spectroscopy	Elective		Spring	5
CENG70027	Biochemical Engineering	Elective		Spring	5
CENG70035	Carbon Capture and Clean Fossil Fuels	Elective		Autumn	5
CENG70006	Colloids and Interface Science	Elective		Spring	5
CENG70005	Dynamical Systems in Chemical Engineering	Elective		Autumn	5
CENG70036	Membrane Science and Membrane Separation Processes	Elective		Spring	5
CENG70008	Modelling of Biological Systems	Elective		Spring	5
CENG70012	Molecular Modelling of Fluids	Elective		Autumn	5
CENG70007	Pharmaceutical Process Development	Elective		Autumn	5

CENG70029	Practical Process Engineering in the Oil and Gas Industry	Elective		Autumn	5
CENG70009	Product Characterisation	Elective		Autumn	5
CENG70011	Transport Processes in Biological Systems	Elective		Autumn	5

### FHEQ Level 6 Electives

You can only choose from the following FHEQ Level 6 electives. Please note that only one business elective can be chosen (business elective module codes begin with BUSI).

Code	Module Title	Core/ Compulsory Elective/	Group	Term	Credits
CENG60009	Advanced Fluid Mechanics	Elective		Spring	5
CENG60013	Nuclear Chemical Engineering	Elective		Spring	5
CENG60003	Particle Engineering	Elective		Spring	5
CENG60014	Process Heat Transfer	Elective		Spring	5
CENG60017	Sustainable Energy Technologies	Elective		Spring	5
CENG60020	Biochemical Sensors	Elective		Spring	5
BUSI60037	Accounting (Online)	Elective		Autumn	5
BUSI60033	Business Economics	Elective		Autumn	5
BUSI60039	Business Strategy	Elective		Spring	5
BUSI60040	Corporate Finance (Online)	Elective		Spring	5
BUSI60041	Entrepreneurship	Elective		Autumn	5
BUSI60042	Entrepreneurship (Online)	Elective		Autumn	5
BUSI60035	Finance and Financial Management	Elective		Spring-Summer	5
BUSI60045	Managing Innovation	Elective		Autumn	5
BUSI60044	Managerial Economics (Online)	Elective		Spring	5
BUSI60046	Project Management	Elective		Spring	5
BUSI60022	Leading Teams and Organisations	Elective		Spring	5

Please note that electives may not run due to low student numbers and lecturer availability.

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

#### **Award of the Postgraduate Certificate (PG Cert)**

To qualify for the award of a postgraduate certificate you must have a minimum of 30 credits from taught modules at Level 7 (this may include a maximum of 10 credits from Level 6 where this is approved as part of the award).

#### **Award of the Masters Degree (MSc)**

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

1. accumulated credit to the value of no fewer than 90 credits across Levels 6 and 7 (of which 75 credits must be at Level 7);
2. and no more than 10 credits\* as a Compensated Pass;
3. met any specific requirements for an award as outlined in the approved programme specification for that award.

\* Note: The programme is IChemE accredited and no more than 10 credits as a Compensated Pass are permitted.

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

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

1. 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 is determined through the Programme Overall Weighted Average and the designated dissertation or final major project module 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**

As an accredited programme, students are subject to the standards set by the UK Engineering Council in relation to compensation. A maximum of 10 ECTS credits can be compensated across the entire programme.

## Supporting Information

The Programme Handbook is available from the department.

The Module Handbook is available from the department.

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

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