

Programme Information		
Programme Title	Programme Code	HECoS Code
MEng Chemical Engineering	H801	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
MEng Chemical Engineering	4 years	Full-Time	Annually in October	240	480

A student who withdraws before completing the MEng Chemical Engineering programme may be offered the following exit awards at the discretion of the Board of Examiners provided that they have met the ECTS requirements for that award in line with College Regulations: Certificate in Higher Education in Chemical Engineering (60 ECTS), Diploma in Higher Education in Chemical Engineering (120 ECTS), BEng Chemical Engineering (Ordinary) (150 ECTS) and BEng Chemical Engineering (Hons) (180 ECTS). These exit awards are not accredited.

Ownership			
Awarding Institution	Imperial College London	Faculty	Faculty of Engineering
Teaching Institution	Imperial College London	Department	Chemical Engineering
Associateship	City and Guilds of London Institute (ACGI)	Main Location(s) of Study	South Kensington Campus
External Reference			
Relevant <a href="#">QAA Benchmark Statement(s)</a> and/or other external reference points	<a href="#">Master's Degrees in Engineering</a>		
<a href="#">FHEQ Level</a>	Level 7		
<a href="#">EHEA Level</a>	2nd Cycle		
External Accreditor(s) (if applicable)			
External Accreditor 1:	<a href="#">Institution of Chemical Engineers (IChemE)</a>		
Accreditation received:	2014	Accreditation renewal:	2024
Collaborative Provision			
Collaborative partner	Collaboration type	Agreement effective date	Agreement expiry date
N/A	N/A	N/A	N/A
Specification Details			
Programme Lead	Prof Jerry Heng		

Student cohorts covered by specification	2021-22 entry
Date of introduction of programme	October 19
Date of programme specification/revision	October 2021

## Programme Overview

The aim of this programme is to graduate students of the highest quality who will demonstrate technical and professional leadership and who will go on to successful careers in industrial and other sectors of the economy.

You will achieve this aim by developing a strong foundation in the fundamental principles of science, mathematics and engineering and use this to build sound practical expertise and engineering judgement. You will study core chemical engineering subjects and will be able to demonstrate your competency in these subjects through the use of the 'mastery' concept. This is a holistic, systems-based approach to problem analysis and solution which ensures that students can apply the essential elements of Chemical Engineering to a high standard. You will also study relevant business and economic subjects as well as acquire a firm understanding of sustainability which is embedded within several modules. This will complement your core competencies resulting in a well-rounded graduate profile.

The programme will use a variety of learning and teaching methods to help you become an independent practitioner and you are expected to contribute to the discussion with academic and technical staff during your lectures, practical work and laboratories.

We aim to encourage interdisciplinary interests and you may find that as you become more aware of the chemical engineering industry, your interests may develop in complementary directions. A significant range of options are, therefore, available in the last two years of the programme which provide the opportunity to explore individual and career preferences. Examples of these options include to study abroad for a year (in English or a foreign language) or choosing elective subjects which range from core chemical engineering subjects to management and humanities options, as well as technical options from across the Faculty of Engineering.

As part of an integrated approach, you will also develop your professional and transferrable skills which include group working, time and project management, problem-solving and competence in oral and written communication. You will also gain a strong awareness of industrial requirements for professional ethics, health and safety. This will broaden your outlook and employability skills.

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

### Year Abroad

The MEng Chemical Engineering with a Year Abroad (H802) programme is a pathway within the MEng Chemical Engineering degree where you will spend your third undergraduate year abroad at one of our partner universities and then return to Imperial for your final year. Further information can be found in the Programme Specification for this programme

### MEng Chemical with Nuclear Engineering degree (H890)

The MEng Chemical with Nuclear Engineering degree (H890) is a specialised course offered by the Department of Chemical Engineering, focused on preparing graduates for employment in the nuclear or related industries. There is an option to transfer from the MEng Chemical Engineering (H801) programme to the MEng Chemical with Nuclear Engineering degree (H890) at the end of your second year. Further information can be found in the Programme Specification for this programme

## Learning Outcomes

Upon successful completion of your MEng Chemical Engineering programme, you will be able to:

### Knowledge and Understanding

1. Demonstrate a strong fluency in the fundamental principles of mathematics and science which underpin chemical engineering;

2. Explain the advanced principles and theory of reaction engineering, separations, transfer processes, control systems, process analysis and process design to integrate and apply these to practical engineering situations;
3. Demonstrate an understanding of the ethical, health, safety and sustainability requirements within the process industries;
4. Acquire and develop a broad knowledge base which includes an appreciation of business, humanities and management subjects;

#### **Intellectual Skills**

5. Think critically in the context of open-ended problems and develop investigative and modelling strategies to solve them;
6. Demonstrate the skills necessary to plan, conduct and report a programme of independent research or a project of direct and immediate industrial relevance;
7. Exercise engineering judgement and employ advanced diagnostic, modelling and innovative skills in order to optimise the performance of selected chemical engineering systems;

#### **Practical Skills**

8. Start-up, operate and shut down safely a pilot-scale process plant;
9. Analyse experimental results using a wide range of computational tools and packages to determine the range of their accuracy, precision, and validity;
10. Plan, execute and experiments for a variety of industrially relevant problems in order to choose optimal solutions and/or deliver set targets;
11. Iteratively design, evaluate and optimise selected chemical engineering systems and processes;

#### **Professional Skills Development**

12. Acquire a range of professional skills and proficiencies including effective communication, team-working, time management and leadership;
13. Demonstrate an awareness of the ethical, environmental, economic and social impact of chemical processes;
14. Acquire and develop skills for the purpose of continuous professional development.

The MEng in Chemical Engineering is an accredited degree with the Institution of Chemical Engineers (UK) which meets all academic requirements to achieve chartered status, should you wish to pursue this professional recognition after graduation.

If you withdraw from the MEng Chemical Engineering programme and are offered a BEng Chemical Engineering (Pass) exit award, you will have achieved the following learning outcomes:

#### **Knowledge and Understanding**

1. Use and apply the fundamental principles of mathematics and science which underpin chemical engineering;
2. Explain the fundamental principles and theory of reaction engineering, separations, transfer processes, control systems, process analysis and process design and be able to use these to solve selected engineering problems;
3. Demonstrate an understanding of the ethical, health, safety and sustainability requirements within the chemical engineering industry;
4. Acquire an appreciation of business, humanities and management subjects;

#### **Intellectual Skills**

5. Think critically to develop strategies to solve practical engineering problems;
6. Demonstrate the skills necessary to plan, conduct and report a programme of guided research or project of direct and immediate industrial relevance;
7. Exercise engineering judgement in order to optimise the performance of selected chemical engineering systems;

#### **Practical Skills**

8. Start-up, operate and shut down safely a pilot-scale process plant;
9. Plan and execute experiments for selected industrially relevant problems and analyse the experimental results using selected computational tools and packages to determine the range of their accuracy and validity;

### **Professional Skills Development**

10. Communicate effectively through oral presentations and written reports using a wide range of ICT packages;
11. Work effectively in a team to achieve an objective under imposed time and resource constraints, with due respect and recognition to contribution from other members of the team;
12. Demonstrate effective time-management and leadership skills.

The BEng Chemical Engineering is not an accredited degree and is only awarded at the discretion of the Board of Examiners in line with College Regulations. Should you wish to pursue recognition as a professional chemical engineer after withdrawing, a full review of your academic formation and possibly further study will be necessary to support your application for professional registration.

If you withdraw from the MEng Chemical Engineering programme and are offered a Diploma in Higher Education in Chemical Engineering exit award, you will have achieved the following learning outcomes:

### **Knowledge and Understanding**

1. Use and apply the fundamental principles of mathematics and science which underpin chemical engineering;
2. Explain the basic principles of reaction engineering, separations, transfer processes and process analysis and use these to solve foundational engineering problems;
3. Demonstrate a basic understanding of the ethical and sustainability requirements within the chemical engineering industry;

### **Intellectual Skills**

4. Analyse and evaluate the performance of selected chemical engineering systems and be able to make recommendations to optimise their performance;

### **Practical Skills**

5. Start-up, operate and shut down safely a pilot-scale process plant;
6. Plan and execute experiments for foundational industrial problems and analyse the experimental results to determine the range of their accuracy and validity;

### **Professional Skills Development**

7. Communicate effectively through oral presentations and written reports using ICT packages;
8. Work effectively in a team and demonstrate effective time-management to achieve an objective under imposed resource constraints;

The Diploma in Higher Education in Chemical Engineering is not an accredited programme and is only awarded at the discretion of the Board of Examiners in line with College Regulations. Should you wish to pursue recognition as a professional chemical engineer after withdrawing, a full review of your academic formation and further academic study will be necessary to support your application for professional registration.

If you withdraw from the MEng Chemical Engineering programme and are offered a Certificate in Higher Education in Chemical Engineering exit award, you will have achieved the following learning outcomes:

### **Knowledge and Understanding**

1. Use and apply the fundamental principles of mathematics and science which underpin chemical engineering;
2. Explain the basic principles of separations, transfer processes and process analysis and use these to solve foundational engineering problems;
3. Demonstrate a basic understanding of the sustainability requirements within the chemical engineering industry;

### **Intellectual Skills**

4. Analyse and evaluate the performance of selected chemical engineering systems;

### **Practical Skills**

5. Execute basic experiments and analyse the experimental results to determine their accuracy and validity;

### **Professional Skills Development**

6. Communicate effectively through written reports using ICT packages;
7. Work effectively in a team and demonstrate effective time-management skills.

The Certificate in Higher Education in Chemical Engineering is not an accredited programme and is only awarded at the discretion of the Board of Examiners in line with College Regulations. Should you wish to pursue recognition as a professional chemical engineer after withdrawing, a full review of your academic formation and further academic study will be necessary to support your application for professional registration.

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><b>A Level Requirements:</b> Minimum A*A*A</p> <p>A* in Mathematics, A* in Chemistry, Relevant subjects for the remaining A-level include: Physics, Biology, Further Mathematics, and Economics</p> <p><b>IB Requirements:</b> Minimum 39 overall (or a comparable qualification recognised by the College)</p> <p>7 in Mathematics at higher level, 6 in Chemistry at higher level, 6 in Physics or Biology at higher level – Economics may also be considered (or a comparable qualification recognised by the College).</p> <p>For further information on entry requirements, please go to <a href="https://www.imperial.ac.uk/study/ug/apply/requirements/ugacademic/">https://www.imperial.ac.uk/study/ug/apply/requirements/ugacademic/</a></p>
Non-academic Requirements	N/A
English Language Requirement	<p><a href="#">Standard requirement</a> Please check for other <a href="#">Accepted English Qualifications</a></p>
Admissions Test/Interview	There is no Admissions Test for entry onto the programme but an interview is required.

The programme's competency standards documents can be found at: <http://www.imperial.ac.uk/engineering/departments/chemical-engineering/courses/undergraduate/admissions/>

## Learning & Teaching Approach

Our Chemical Engineering programme aims 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. Further learning support is also available from the Centre for Academic English (<http://www.imperial.ac.uk/academic-english>) and the Library (<https://www.imperial.ac.uk/admin-services/library/learning-support/>).

### 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 modules. The first year Foundation Lab teaches practical skills through illustrating relevant engineering scenarios. The second year Knowledge Laboratory module focuses on solving practical engineering problems through using unit operations and relates the theoretical knowledge gained through lectures to practical results. The third year Discovery Laboratory consists of open-ended investigative experiments requiring searching for information, objective analysis, experimental planning, and scientific conclusion. All modules develop laboratory skills within a culture of safe working. You will also be taught the fundamentals of chemical plant operation and learn how to control and operate a state-of-the-art pilot plant for a variety of practical engineering situations.

### **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 reactors, process control systems, whole-plant flow sheets and mechanical 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.

### **Professional and transferable skills**

Throughout your course, you will also attend workshops designed to develop transferable skills (e.g. career development, team building, ethical behaviour, and report-writing and presentation skills). These will be complemented by options to develop individual interdisciplinary interests, and you may choose to study abroad for a year (in English or a foreign language) or choose electives that focus on different disciplines such as humanities, business and management studies and other STEMM subjects and other technical options from across the College.

### **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 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. 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 indicative total study time of 25 hours. Therefore, the indicative total study time is 1500 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.

Typically, in the first 3 years of your programme, you will spend around 25% of your time in lecturers, tutorials and other time-tabled activities (around 380 hours). The remaining 75% (around 1120 hours) will be used for independent study.

In your fourth year, you will spend about 10% of your time in lectures and tutorials (about 150 hours) and approximately 15% of your time undertaking team activities as part of your final design project (about 250 hours). The rest of your time will be spent in independent study.

## **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, practical work and examinable components:

	Year 1	Year 2	Year 3	Year 4
<b>Coursework</b>	20%	30%	40%	45%
<b>Practical</b>	10%	7.5%	5%	5%
<b>Examination</b>	70%	62.5%	55%	50%

#### Academic Feedback Policy

The department strives to provide timely and rich feedback to students on all coursework. For standard pieces of coursework the department adheres to the college's 10 working-day rule. Larger coursework items (e.g. design or research projects) have longer turn-around times that are published.

Solutions to the exam questions are provided on Blackboard after exam results have been ratified at the Board of Examiners' meeting. Students who have failed and are invited to retake the exam in accordance with college regulations are provided with individual feedback.

The College's Policy on Academic Feedback and guidance on issuing provisional marks to students is available at:

[www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/](http://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/exams-and-assessment/)

#### Re-sit Policy

The College's Policy on Re-sits is available at: [www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/](http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/)

#### Mitigating Circumstances Policy

The College's Policy on Mitigating Circumstances is available at: [www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/](http://www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/)

#### Additional Programme Costs

There are additional costs associated with the MEng Chemical Engineering with a Year Abroad which are not included in your tuition fees and are only applicable to your year abroad.

Description	Mandatory/Optional	Approximate cost
Travel costs and living expenses (including accommodation)	Mandatory	Varies*
Travel and health insurance	Mandatory	Varies*

\*please speak with your Exchange Coordinator for more information

**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>					
Year 1 – FHEQ Level 4 Students study all core and compulsory modules.					
Code	Module Title	Core/ Compulsory/ Elective	Group	Term	Credits
CENG40001	Mastery 1	Core	N/A	1, 2	5.0
CENG40002	Process Analysis	Core	N/A	1	5.0
CENG40003	Chemical Engineering Practice 1	Core	N/A	1, 2	10.0
CENG40004	Transfer Processes 1	Core	N/A	1, 2	7.5
CENG40005	Thermodynamics 1	Core	N/A	1, 2	5.0
CENG40009	Separation Processes 1	Core	N/A	2	5.0
CENG40006	Chemistry 1	Compulsory	N/A	1, 2	7.5
CENG40007	Mathematics Fundamentals	Compulsory	N/A	1, 2	10.0
CENG40008	Physical Chemistry	Compulsory	N/A	1, 2	5.0
Credit Total					60
Year 2 - FHEQ Level 5 Students study all core and compulsory modules.					
Code	Module Title	Core/ Compulsory/ Elective	Group	Term	Credits
CENG50001	Mastery 2	Core	N/A	1, 2	5.0
CENG50002	Transfer Processes 2	Core	N/A	2	5.0
CENG50003	Chemical Engineering Practice 2	Core	N/A	1, 2	10.0
CENG50004	Reaction Engineering 1	Core	N/A	1	7.5
CENG50005	Thermodynamics 2	Core	N/A	1	5.0
CENG50006	Process Dynamics and Control	Core	N/A	1	5.0

<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.



CENG50009	Separation Processes 2	Core	N/A	2	5.0
CENG50007	Engineering Mathematics	Compulsory	N/A	1	10.0
CENG50008	Chemistry 2	Compulsory	N/A	2	7.5
Credit Total					60

<b>Year 3 - FHEQ Level 6</b>					
<b>Students study all core and compulsory modules and also choose ONE elective at Level 6.</b>					
Code	Module Title	Core/ Compulsory/ Elective	Group	Term	Credits
CENG60001	Mastery 3	Core	N/A	1, 2	5.0
CENG60002	Reaction Engineering 2	Core	N/A	1	5.0
CENG60003	Particle Engineering	Core	N/A	2	5.0
CENG60004	Process Design	Core	N/A	2	10.0
CENG60005	Safety and Loss Prevention	Core	N/A	1	5.0
CENG60006	Environmental Engineering	Core	N/A	2	5.0
CENG60007	Chemical Engineering Practice 3	Core	N/A	1, 2	10.0
CENG60008	Process Optimisation	Compulsory	N/A	1	5.0
	I-Explore	Compulsory	N/A	1 or 2	5.0
CENG60012	Membrane Science and Membrane Separation Processes	Elective*	A	2	5.0
CENG60013	Nuclear Chemical Engineering	Elective*	A	2	5.0
CENG60010	Biochemical Engineering	Elective*	A	1	5.0
CENG60011	Carbon Capture and Clean Fossil Fuels	Elective*	A	1	5.0
CENG60017	Sustainable Energy Technologies	Elective*	A	2	5.0
CENG60014	Process Heat Transfer	Elective*	B	2	5.0
CENG60009	Advanced Fluid Mechanics	Elective*	B	2	5.0
Credit Total					60
<p>* Across both years 3 and 4, you must choose at least 2 electives from Group A (Breadth modules) and 2 electives for Group B (Depth modules). Please note that electives may not run due to low student numbers and lecturer availability.</p>					

**Year 4 - FHEQ Level 7****Students study all core modules and choose SIX electives at Level 7.**

Code	Module Title	Core/ Elective	Group	Term	Credits
	Chemical Engineering Practice 4	Core	N/A	1, 2	30.0
	Colloids and Interface Science	Elective*	A	1	5.0
	Product Characterisation	Elective*	A	2	5.0
	Applied Spectroscopy	Elective*	A	1	5.0
	Advanced Process Operations	Elective*	B	2	5.0
	Advanced Process Optimisation	Elective*	B	1	5.0
	Dynamic Behaviour of Process Systems	Elective*	B	1	5.0
	Dynamical Systems in Chemical Engineering	Elective*	B	1	5.0
	Pharmaceutical Process Development	Elective*	B	2	5.0
	Modelling of Biological Systems	Elective*	B	2	5.0
	Advanced Bioprocess Engineering	Elective*	B	2	5.0
	Transport Processes in Biological Systems	Elective*	B	1	5.0
	Molecular Modelling of Fluids	Elective*	B	1	5.0
Credit Total					60

\* Across both years 3 and 4, you must choose at least 2 electives from Group A (Breadth modules) and 2 electives from Group B (Depth modules). Please note that electives may not run due to low student numbers and lecturer availability.

## Progression and Classification

### Progression

In order to progress to the next level of study, you must have passed all modules (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%, 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

For this award, Year One is weighted at 7.50%, Year Two is weighted at 20.00%, Year Three is weighted at 36.25% and Year Four is weighted at 36.25%.

The College 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 |

Please find the full Academic Regulations at <https://www.imperial.ac.uk/about/governance/academic-governance/regulations/>. Please follow the prompts to find the set of regulations relevant to your programme of study.

## Programme Specific Regulations

In order to fulfil a part of the IChemE accreditation requirements of your programme, you are expected to pass the HAZOP component of your Year 3 Safety and Loss Prevention module. A hazard and operability study (HAZOP) is a structured and systematic analysis of a process or operation that is used to identify and evaluate risks to persons or equipment.

As an accredited degree, students on this programme are subject to the standards set by the Engineering Council in relation to compensation: a maximum of 15 ECTS credits can be compensated across the entire programme.

## Supporting Information

The Programme Handbook is available at: **TBA**

The Module Handbook is available at: **TBA**

The College's entry requirements for undergraduate programmes can be found at:  
[www.imperial.ac.uk/study/ug/apply/requirements/](http://www.imperial.ac.uk/study/ug/apply/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 a typical student may reasonably be expected to achieve and demonstrate if s/he takes 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.**

## Modifications

Description	Approved	Date	Paper Reference
N/A	N/A	N/A	N/A