Programme Information		
Programme Title	Programme Code	HECoS Code
MEng Electronic and Information Engineering	For Registry Use Only	For Registry Use Only

Award	Length of Study	Mode of Study	Entry Point(s)	Total Credits	
				ECTS	CATS
MEng Electronic and Information Engineering – Technical[4]	4 years	Full-Time	Annually in October	240-270	480-540
MEng Electronic and Information Engineering – Year Abroad[1,2,3,4]	4 years	Full-Time	N/A	240-270	480-540

[1]The MEng Electronic and Information Engineering with a Year Abroad is not available for entry. You must apply to join the MEng Electronic and Information Engineering or the MEng Electronic and Electrical Engineering – Technical programme to be eligible.

[2]The MEng Electronic and Information Engineering with a Year Abroad is a pathway where you take a year abroad placement in your fourth year. A placement in an overseas institution is subject to language proficiency (minimum level 3; language courses are available within the College) and performance at upper second class level in the first three years of the programme. The placements are competitive and the final selection is made following an interview.

[3]Successful visa application might be necessary. Advice on visa requirements can be obtained from the International Office.

[4]If you leave before completing the MEng Electronic and Information Engineering programme, you may be offered the following exit awards at the discretion of the Board of Examiners provided that you have met the minimum ECTS requirements for that award in line with College Regulations: Certificate in Higher Education in Electronic and Information Engineering (45 ECTS at level 4, 60 ECTS total), Diploma in Higher Education in Electronic and Information Engineering (45 ECTS at level 5, 120 ECTS total) and BEng in Electronic and Information (Pass) (30 ECTS at level 6, 150 ECTS total). These exit awards are not accredited. In addition, a BEng in Electronic and Information (Honours) exit award can be offered if you obtain a minimum of 180 ECTS in total and complete a final year project. This degree is accredited.

Ownership			
Awarding Institution	Imperial College London	Faculty	Faculty of Engineering
Teaching Institution	Imperial College London	Department	Electrical and Electronic Engineering
Associateship	City and Guilds of London Institute (ACGI)	Main Location(s) of Study	South Kensington
External Reference			
Relevant QAA Benchmark Statement(s) and/or other external reference points		Master's award in Electronic and Information Engineering	
FHEQ Level		Level 7	
EHEA Level		2nd Cycle	
External Accreditor(s) (if applicable)			
External Accreditor 1:	Institution of Engineering and Technology		

Accreditation received:	2018	Accreditation renewal:	2023
Collaborative Provision			
Collaborative partner	Collaboration type	Agreement effective date	Agreement expiry date
N/A	N/A	N/A	N/A
Specification Details			
Programme Lead		Director of Undergraduate Studies	
Student cohorts covered by specification		2019-2020 entry	
Date of introduction of programme		2019	
Date of programme specification/revision		2020	

Programme Overview

ABOUT THE DEPARTMENT
The Department's main objectives are to deliver high quality teaching and conduct internationally leading research. The department carries out research across a wide range of topics, and targets both fundamental advances and practical applications of science and technology. The quality and impact of our research are demonstrated by our many highly cited publications, the personal recognition of our researchers through awards and honours, and the commercial adoption of our results and innovations. Our research also feeds into our teaching, especially in the 4th and final year where members of staff bring their research into the classroom and devise exercises in line with research expectations. We see educating the next generation of engineers as a key role, and our graduates are highly valued by industry and commerce around the world. Our undergraduate degrees are aligned to our research strengths, and we are proud of the depth of analytical treatment and the specialised optional subjects we offer within our degree programmes.

The Electronic and Information Engineering discipline is considered interdisciplinary in character because Electronic and Information Engineers work in a wide range of areas including robotics, machine learning, communication systems and networking. Design and analysis of systems is at the core of this programme and you will be offered multiple opportunities to develop your skills in this area. The programme offers technical rigour and depth in a wide range of modern engineering topics.
Click on further information to go to the department's website.

ABOUT THE MEng PROGRAMME
The department offers both a three-year BEng programme and four-year integrated Master's MEng programme. Both degree programmes involve substantial group and individual project work. The MEng programme has the added benefit of an industrial placement or consultancy group project, and in your final year of your programme you will be able to choose from a range of Master's level elective modules and gain further exposure to cutting-edge research problems in a wide range of information engineering topics.
The goal of this programme is to prepare you to become a high quality graduate who will innovate beyond current practice, whether in the electronic/electrical industry, information technology, research, or financial organisations. The EIE stream helps you understand the entire stack of modern networked computers, from the design and architecture of the CPU in a smart-phone, to the information theory and wireless protocols connecting it to the internet, and the operating systems and databases providing back-end support in the cloud.

This programme specification describes the academic path given in figure 1, below.

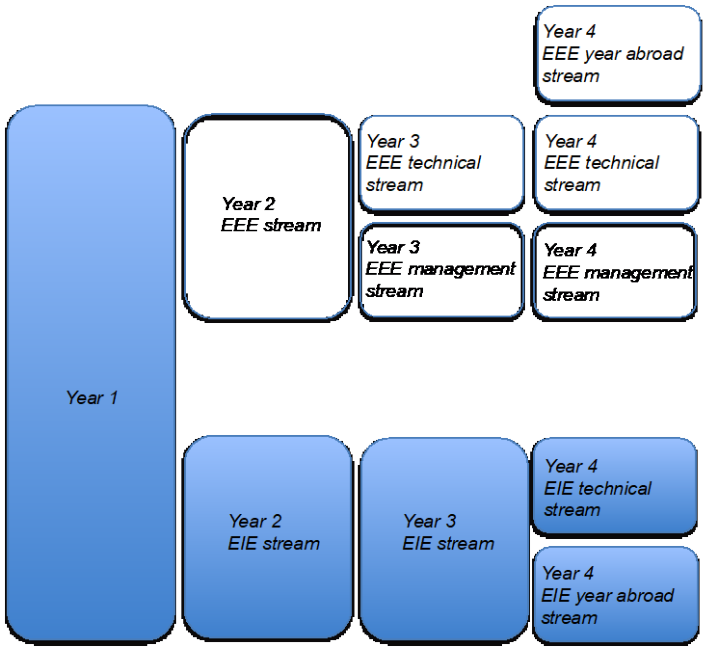

Figure 1: Programme structure with the different streams opening up after the 1st, 2nd and 3rd year. The colour filled boxes relate to this programme specification. For the other streams, please refer to the appropriate programme specification.

After the first year you will be able to choose between the Electrical and Electronic Engineering (EEE) stream and the Electronic and Information Engineering (EIE) stream. EEE focuses more on the physics behind electrical engineering whilst EIE is oriented towards information processing. This document describes the EIE stream.

In the first year you will be taught the fundamental principles in engineering. In the second year you will specialise more in information processing and computer engineering related fundamentals. In third and fourth year, you will be able to take advanced specialised topics, which will give you the most direct route to a specialist professional engineering career or a career in research and development. You will also have access to some modules offered by other engineering departments and some non-engineering topics such as management and entrepreneurship as well as languages and other modules offered by the Business School and Imperial Horizons.

In the third year, the MEng degree gives you the opportunity to be involved in industry-led consultancy projects or an industrial placement within the degree structure. This will give you an opportunity to develop your engineering skills outside a purely academic setting.
In the fourth year of the accredited MEng programme, you will be required to complete an Individual Project.

The year abroad stream will give you an opportunity to explore other countries and cultures whilst studying in one of our partner institutions. Access to the Year Abroad is competitive and based on language skills, academic performance and an interview with the Year Abroad Organiser. You may also need to successfully apply for a student visa[1]. If you are not successful in obtaining a place on the year abroad programme, you will be allowed to proceed on the MEng stream programme.

TRANSFERRING BETWEEN PROGRAMMES
All stream changes should be discussed with your personal tutor or the senior tutor.

All Programmes
All programmes within the department have a common first year. It is therefore possible to transfer between the EIE and EEE streams up until the end of your first year.

[1] In light of the vote for the United Kingdom to leave the European Union this might apply to all students, including UK students.

BEng to MEng
Year two is common between the EIE MEng and EIE BEng. Students can choose at any point up until end of year two to change between MEng and BEng. Before stream changes at this stage, you will need to contact the International Office concerning any visa requirements.

To progress to year four of the MEng, you must have achieved a minimum of 50% overall (weighted average of years 1 to 3).

A move to the BEng stream will remove your opportunity to be involved in an industry-related experience within the degree structure.

ABOUT OUR TEACHING
We use a variety of teaching methods that include large group lecture sessions, workshops, small group exercise sessions, as well as 3-to-1 tutorial sessions. For practical skills you will participate in laboratory sessions with a partner from the same year group, and in the group projects within a larger team of 6-7 people.

Your learning will be supported by online tools such as blackboard for self-assessment and for-credit tests, Maple TA for mathematics support, virtual labs to prepare you for lab sessions and video recordings to demonstrate how certain equipment needs to be used. Members of staff are experts in their field and bring their research and industrial expertise into the classrooms, especially in years 3 and 4. You can find out more about the connections between our research and teaching here: http://www.imperial.ac.uk/electrical-engineering/study/undergraduate/explore/teaching-staff/

Graduate and Undergraduate Teaching Assistants are involved in our tutor schemes, small group teaching and laboratory teaching.

The MEng programme has been designed based upon a number of key principles:

- **Competence in the fundamental principles of mathematics and electrical/electronic/ information engineering**: You will develop a firm grasp of the fundamental concepts and principles, be able to model complex systems analytically, and analyse and optimise these models.
- **Excellence in computer engineering:** You will acquire a high level of competence in both programming and in using the latest computing technologies, and be able to start creating the next generation of languages and hardware.
- **Pro-active learning**: You will learn how to learn by yourself and acquire the skill and discipline of lifelong learning.
- **Design Proficiency**: You will develop your ability to incorporate concepts into design of new products or processes, to provide innovations.
  Development of professional and transferrable skills: You will learn how to work in groups, develop your ability to communicate scientific/engineering ideas orally or in written form, and to develop general problem-solving skills.
- **Industrial perspectives**: You will be able to participate in an industrial based project via a six-month industrial placement, or a term long industry-led group consultancy project at the end of your third year. You will be encouraged to find industrial experience where possible.
- **Flexibility of provision**: We aim to provide you with a wide variety of options in the third and fourth years of the programme in order to allow you to specialise in specific areas of electronic/computer engineering.

Benefits of accreditation
This programme is professionally accredited by the Institution of Engineering and Technology (IET) on behalf of the Engineering Council for the purposes of fully meeting the academic requirements for registration as a Chartered Engineer.

Achieving a professionally accredited integrated Master's degree (MEng) means that you have satisfied the first step to becoming a Chartered Engineer (CEng) in your chosen field by satisfying the educational requirements of professional registration. To gain Chartered status, you will need to demonstrate your ability to meet additional graduate level competences described in the Engineering Council's UK-SPEC

A CEng is a highly respected qualification earned by professionals working in engineering, which can lead to higher earning potential and better career prospects.

Professional registration also brings international recognition of your qualification, which is particularly useful for students preparing for a career abroad.

Learning Outcomes

At the end of the four year MEng programme you will be able to:

Science and Mathematics

1. Explain and derive the fundamental concepts, mathematical abstractions, physical principles and applied techniques that underpin electronic and computer engineering, while being able to extrapolate your insight into related disciplines.
2. Solve familiar and unfamiliar problems using established methodologies as well as deriving, adapting and applying new methodologies that support innovation towards future developments in specialised fields.

Engineering Analysis

3. Apply analytic principles and techniques, software engineering skills, as well as commercial software packages, to critically analyse, design, implement and simulate engineering systems incorporating both hardware and software, justifying approaches and recommending alternative ones in line with design criteria.
4. Interpret abstraction and justify the use of computational techniques, and be able to identify appropriate components to automate and optimise systems and processes.

Design

5. Communicate, interact and work with peers and professionals from other disciplines, as well as non-specialist stakeholders, making decisions in complex and unpredictable situations, and manage work in terms of project plans, deliverables and costs.
6. Generate creative and innovative design for products, systems, components or processes to fulfil new needs.

Economic, legal, social, ethical and environmental context

7. Explain the role of business processes in engineering, including the commercial, societal and legal framework within which industry operates and advise stakeholders on their implications.
8. Incorporate ethical, sustainability and environmental issues into your professional conduct, and integrate these into your engineering practice.

Engineering Practice

9. Manage projects in both interdisciplinary and multidisciplinary environments by using relevant practical and laboratory skills on your own or as a member or leader in a team.
10. Design relevant systems, components or processes that meet specified industrial requirements and constraints while keeping within public health and safety, cultural, societal, and environmental constraints. Work proactively with others to formulate solutions to the implications of ethical dilemmas.

Exit awards are only granted at the discretion of the Board of Examiners in line with College Regulations. None of the exit awards are accredited, apart from the BEng Electrical and Electronic (Honours) exit award. Should you wish to pursue recognition as a professional computer engineer after leaving without an accredited degree, a full review of your academic history and possibly further study will be necessary to support your application for professional registration.

On completion of Year Three (BEng Electronic and Information Engineering exit award) you will be able to:

Science and Mathematics

1. Explain the fundamental concepts, mathematical abstractions, physical principles and applied techniques that underpin electronic and computer engineering, while having an insight into related disciplines.
2. Solve familiar and unfamiliar problems using established methodologies as well as deriving, adapting and applying new ones with minimal guidance.

Engineering Analysis

3. Apply analytic principles and techniques, software engineering skills, as well as commercial software packages, to critically analyse, design, implement and simulate engineering systems incorporating both hardware and software, justifying approaches and recommending alternative ones in line with design criteria.
4. Interpret abstraction and justify the use of computational techniques, and be able to identify appropriate components to automate and optimise systems and processes.

Design

5. Communicate, interact and work with peers and professionals from other disciplines, as well as non-specialist stakeholders, making decisions in complex situations, and manage work in terms of project plans, deliverables and costs.

Economic, legal, social, ethical and environmental context

6. Explain the role of business processes in engineering, including the commercial, societal and legal framework within which industry operates and advise stakeholders on their implications.

7. Incorporate ethical, sustainability and environmental issues into your professional conduct, and integrate these into your engineering practice.

Engineering Practice

8. Manage projects in both interdisciplinary and multidisciplinary environments by using relevant practical and laboratory skills on your own or as a member in a team.
9. Design relevant systems, components or processes that meet specified industrial requirements and constraints while keeping within public health and safety, cultural, societal, and environmental constraints.

On completion of Year Two (Diploma in Higher Education exit award) you will be able to:

Science and Mathematics

1. Explain the fundamental concepts, mathematical, physical principles and techniques that underpin electronic and computer engineering.
2. Solve familiar problems using established methodologies as well as deriving, adapting and applying new ones with guidance.

Engineering Analysis

3. Apply software engineering skills to analyse, design, implement and simulate electronic engineering systems, justifying approaches in line with design criteria.

Design

4. Communicate, interact and work with peers and professionals from other disciplines and manage work in terms of project plans, deliverables and costs.

Economic, legal, social, ethical and environmental context

5. Explain the role of business processes in engineering, including the commercial, societal and legal framework within which industry operates and advise stakeholders on their implications.
6. Have an insight into ethical, sustainability and environmental issues related to your professional conduct.

Engineering Practice

7. Manage projects by using relevant practical and laboratory skills on your own or as a member in a team.

On completion of Year One (Certificate in Higher Education exit award) you will be able to:

Science and Mathematics

1. Describe and recall the fundamental concepts, mathematical, physical principles and techniques that underpin electronic and information engineering.
2. Solve familiar problems using established methodologies with guidance.

Engineering Analysis

3. Apply analytic principles and techniques, software engineering skills to analyse and simulate electronic engineering systems, recognising the approaches needed in line with design criteria.

Design

4. Communicate, interact and work with peers and manage work in terms of project plans, deliverables and costs.

Economic, legal, social, ethical and environmental context

5. Recognise the need for a commercial, societal and legal framework for business processes in engineering.
6. Have an insight into ethical, sustainability and environmental issues related to your professional conduct.

Engineering Practice

7. Manage projects by using relevant practical and laboratory skills on your own or as a member in a team.

The Imperial Graduate Attributes are a set of core competencies that 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

Entry Requirements	
Academic Requirement	Minimum entry standard is A*AA: A* in mathematics A in physics A in another subject with a preference to science-related subjects.

	For non A-level students, a comparable qualification recognised by the College – e.g. for International Baccalaureate: a minimum grade of 38 and 6 in both Mathematics and Physics at higher level. For further information on entry requirements, please go to https://www.imperial.ac.uk/study/ug/apply/requirements/ugacademic/
Non-academic Requirements	NA
English Language Requirement	Higher requirement Please check for other Accepted English Qualifications
Admissions Test/Interview	If you look likely to meet our entry requirements, and your personal statement shows a clear motivation for electronic and information engineering, we will invite you to participate in an interview either here at Imperial, or by Skype. Applicant days are held on Wednesday afternoons between November and March. On these days you will meet some key members of staff and our students will show you around the department. You will be allocated a 30 minutes slot with a member of the academic staff who will quiz you on your UCAS statement, your interests and your mathematics and/or physics knowledge. Interviews are aimed at getting to know you better and ensuring our department is the right place for you to study. Interviews can also happen via skype if you cannot attend an applicant day.

The programme's competency standards documents can be found at:
http://www3.imperial.ac.uk/electricalengineering/teaching/undergraduate/teaching

Learning & Teaching Approach

Teaching Delivery Methods
Your course material will be delivered in different ways, including large cohort lectures in lecture theatres, team-based-learning in smaller groups, flipped classroom approaches, workshops, video recordings for online learning and laboratory work in software, hardware and embedded systems. In addition, tutorials in groups of 3-4 students will support you in analysing your progress and allow you to discuss problems in a more personal environment. Work in the laboratories is done in small teams and will teach you experimental skills, data management and how to work with other people. Team-based-learning will focus mainly on developing analytical skills in solving both well defined as well as open-ended engineering problems. You will be expected to carry out preparation work before lectures and laboratories. Revision of material is a continuous process and keeping up with new contents is key to understanding and remembering engineering concepts and how they link together.

Design and build projects
The aim of the laboratories is to add a practical aspect to the taught modules, to teach you experimental skills, including the safe use of equipment and how to choose components and encourages you to develop robust data recording and analysis skills. Design and build projects aim to bring all the taught concepts and the hard- and software skills together in order to deal with more complex systems that solve an engineering problem supported by a team of 5-8 students. These projects will also allow you to improve your team working skills together with obtaining expertise in management of time and cost. The design and build project will be mainly student-driven in order to allow you liberty in personal development and self-paced assimilation of contents. There will be group projects in the 1st and 2nd year. In the 3rd year you will have a choice between a group project (consultancy for industry) or an individual industrial placement. There is no group project in the 4th year but you will carry out an individual project, often as part of a research team.

Professional and transferable skills
Throughout your programme, 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 by choosing electives in humanities, business and management studies and other STEM subjects from across the College. Professional Engineering is a topic that is integrated in all projects (group, individual and industrial) and is assessed by a Professional Portfolio that needs to be completed in the fourth year.

Independent learning
Independent study is an important part of higher education and we expect you to invest at least two to three hours of independent study for every contact hour. E-learning tools, books in the library and online digital information will support independent study. You are advised to read widely around the topic to expand your knowledge. The aim of independent study is not only to assimilate taught material but also to become an independent learner who, after graduation, can take responsibility for your future learning and development.

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 equates to an expected total study time of 25 hours. Of course, assimilation of new topics is different for everyone and therefore some students will need more or less time to achieve the same learning outcomes.

Year 1 and 2:
The ECTS allocated to each module are defined in the programme structure. Normally for 5 ECTS you will have 20 hours of lectures, 10 hours of team based learning, and 20 hours of laboratories. For every hour of face-to-face support you will be expected to spend two to three hours in self-study supported by videos, online self-assessment, course notes and lecture handouts. This estimation includes tests and exam preparation time. For the laboratory, preparation/revision time will be less but you are expected to spend an hour of preparation for each hour of lab. Preparation for labs will include engaging in the virtual labs, watching the support videos in your own time and reading around the topic. The Design Projects run over 7 weeks in the summer term and is not timetabled. You will receive help to get organised and how to manage the time spent on the project with the members of your team. A member of staff will follow and guide your progress but will not micromanage. We estimate that you will have to spend about 200 hrs on the project. The ratio of self-study to face-to-face time will increase from year 1 to year 4 since we expect you to develop towards independent learning.

Year 3 and 4:
EEE modules have 5 ECTS with approximately 20 hours of face-to-face lecture time and 5 hours of revision support for exam assessed modules. Video recordings support a move to a more self-learning style. Support outside the timetable is available upon request and is delivered by both the academic lead as well as the Graduate Teaching Assistants (GTAs). You are expected to spend a significant amount of time in self-study – approximately 163 hours/module.
For modules that are assessed by coursework, an additional 10 hours face-to-face time will be put in place to support the hardware or software labs for the coursework. Coursework-assessed modules are mainly done in teams and it is expected that a team spends an additional 163 hour/module on coursework outside the face-to-face time. Help from lab technicians and GTAs can be obtained upon request. To be successful with multiple coursework assessment modules that run in parallel, good time management skills will be required to fulfil these obligations.
Members of staff define Final Year Projects (Year 4), however we encourage you to propose your own project and seek a supervisor amongst the members of staff. Industry-led projects are also allowed but you will need to take initiative to organise this and receive approval from the department. Although meetings with your supervisor are not timetabled, both you and your supervisor should mutually agree on suitable times to meet on a regular basis. The success of the outcome will mainly depend on your initiative, creativity, hard work and good communication with your supervisor or the GTA/research assistant who will be helping you.

Department of Computing
In higher years you will have access to elective modules in the Department of Computing (DoC). Please read their programme specifications for more details as the DoC modules might differ from the approach in the Electrical and Electronic Engineering Department. In general DoC modules have a similar workload, and also provide similar support.

Year 4 abroad
When you take the Year Abroad stream, you will follow the programme agreed with the partner institution and discuss the modules you will take with the Year Abroad Organiser. You will be expected to establish a clear study program that maps the learning outcomes of the year abroad choices to the UK Spec requirements. The year aboard organiser will help in this endeavour. This approach will ensure accreditation conditions are fulfilled.

Assessment Strategy

Assessment Methods

Year 1 and 2:

- Formative assessment (low stakes evaluations that give you an insight in your understanding and progress but that do not count towards the marks of your final degree) will be conducted through different techniques, including online self-assessment, key skills assessments, tutorial sessions and other approaches that might evolve based on the developments in learning and teaching technology.

- Summative assessment (assessments that evaluate your understanding of engineering concepts and gives the department an insight into how well you master these). Summative assessments will count towards your final degree and will take the following forms:
  1. Online in-class confidence test that evaluates your understanding of the fundamental principles explained in the modules. This will be closed-book tests and will in general be organised during the reading week (approximately mid-term).
  2. A competence test will run in parallel with the laboratory tests and will be supported by your logbooks that evaluate the application of the concepts in modules but will also evaluate your understanding of the key concepts in each module. These tests will in general be held at the end of the term.
  3. Module level exams. Exams will be closed book but formulae sheets are made available during the exams. Exams are organised in the beginning of the summer term.

  Thus each module assessment will consist of:

Tests per module	Type	Number per term	% Weighting in module
Written (online)	Confidence test	1	20
Practical	Competence test	2	30
Written	Exams	1 (excl. maths – 2[2])	50

  4. Projects are mainly assessed via reports, presentations and portfolios that evaluate your mastery of concepts across module boundaries.

In year 1, the 10 credit modules carry 18% of the year's mark and the 15 credit module 28%. The Electronic Laboratory Skills do not carry marks but you need to have completed them in order to progress to the 2nd year.

In year 2, the 5 credit modules carry 8.5% of the year's mark, the 7.5 credit modules carry 12.5% and the 10 credit module 16.5%.

Year 3 and 4

- Formative assessment will be available as feedback on reports and professional portfolios.

- Summative assessment might take any of the following forms:
  1. Individual tests (online, oral, written).
  2. Alternative methods (demonstrations, presentations, reports, peer assessments, automated source code evaluation)

Assessment type	Individual tests	Alternative methods
Exam-based	80%	20%
Coursework-based	20%	80%

The number and type of assessments depend on the optional module choice. Coursework consists of mini-projects that are module specific and are normally done in small groups. The actual ratio may vary slightly and full details will be in the individual module specifications.

For year 3, on average 50% of the assessments will be exam based and 50% will be based on alternative assessment methods.

Test	% Weighting in year
Individual tests	50
Alternative methods	50

[2] Mathematics does not have tests associated to labs, it will be assessed via online tests and 2 exams, one in the first week of spring term and one in the 1st two weeks of summer term.

For year 3, each elective module carries 13.27% of the marks. The compulsory EEE modules carry 13.27% of the marks. The I-explore module does not carry marks but must be passed to progress to year 4. The Industrial placement/Consultancy project carries 7.11% of the marks.

For year 4, we recommend that you choose your modules such that there is a balance between coursework and exam-assessed modules. For year 4, each module carries 8% of the marks. The Individual Project carries 40% of the marks.

You will be expected to start a Professional Portfolio in your first year. During the subsequent years you must increase and refine the contents, based on evolving experience, insight and formative feedback. Formative feedback on your portfolio will be given every year within the context of the group projects and industrial placement. In year 4 you must submit your Professional Portfolio as part of your degree. It carries ECTS but not a marks weighting towards your final degree.

Year 4 Abroad
You will take the modules and individual project as defined in the host institution. This will be discussed with you before you go abroad. The year abroad organiser will moderate your individual project report, in line with the department's expectations. Since different institutions have slightly different approaches towards their final year, some flexibility in expectations is needed. This can be discussed before the final decision to go abroad.

Department of Computing
Please read their programme specifications for more details as they might differ from the approach in the Electrical and Electronic Engineering Department

Academic Feedback Policy

Formative feedback (unmarked)
Will be via online self-assessment opportunities, group-based-learning approaches (in class and online), comments on reports and portfolios, in-class module feedback and feedback via tutorials.
In Years 1 and 2, weekly mathematics homework will be set on paper or e.g. MapleTA and feedback will be made available within a week. The first year modules Mathematics and Software for Engineers will both be supported by extra, small group work and 1-to-1 tutorials.

Laboratory demonstrators will be available for help and feedback during the laboratory session.
For your final year project, you will receive feedback during an interview on approach and progress from your second marker at an interim stage.

Summative assessments (marks count towards degree)
Will be via online assessment, team-based-learning approaches (in class and online), automated testing of code, comments on reports and portfolios and in-class module test feedback. Feedback on exams is in the form of grades and annotated example answers that will be made available after the September Examiners' Meeting. Summative feedback on the presentations will be provided during the presentation session.

It is the policy of the department to provide feedback within 10 working days except in those circumstances where automatic feedback is implemented or where other arrangements are made.

Important note: You will have an opportunity to take some optional modules from the Department of Computing. Please read their programme specifications for more details as they might differ from the approach in the Electrical and Electronic Engineering Department.

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/

Year 4 Abroad
Feedback will be according to the policies and procedures of the host institution.

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/

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/

Additional Programme Costs		
This section should outline any additional costs relevant to this programme that are not included in students' tuition fees.		
Description	Mandatory/Optional	Approximate cost
Laptop computer	Optional	The recommendation is that you bring your own laptop to join the bring-your-own-devices (BYOD) scheme. The Department runs a free laptop loan scheme for those students without laptop or those who forgot to bring their laptop to College.
Computer software	Optional	The College/Department gives all students access to the required software that support the modules. In those cases where external GPU time is needed, the department runs a refund scheme.
Study abroad	Mandatory	Although the fees to study abroad are covered by interuniversity agreements, you are advised to consider the other costs of studying abroad such as e.g. visa, travel and accommodation. Find more info in etc.
Students will need to consider the costs involved with placements. For students studying or working abroad as part of their programme, costs will vary with destination. Information on the types of costs which may be incurred can be found in the Placements Abroad Handbook which is available at https://www.imperial.ac.uk/placements/information-for-imperial-college-students/		

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[3]					
Year 1 – FHEQ Level 4 **You study all core modules.**					
Code	Module Title	Core/ Elective	Group*	Term	Credits
ELEC40 001	Mathematics: Principles and Engineering Applications	Core		1&2	15
ELEC40 002	Programming for Engineers	Core		1&2	10
ELEC40 003	Analysis and Design of Circuits	Core		1&2	10
ELEC40 004	Digital and Computer Architecture	Core		1&2	10
ELEC40 005	Electronics Laboratory Skills	Core		1&2	5
ELEC40 006	Electronics Design project 1	Core		3	10
Credit Total					60
Year 2 - FHEQ Level 5 **You study all core modules.**					
Code	Module Title	Core/ Elective	Group	Term	Credits
	Mathematics for Engineers	Core		1	5
	Discrete Mathematics	Core		1	5
	Instruction Architectures and Compilers	Core		1&2	7.5
	Software Systems	Core		1	7.5
	Information Processing	Core		1&2	10
	Communications	Core		2	7.5
	Cyber-physical Systems	Core		2	7.5
	Computer Engineering Design Project	Core		3	10
Credit Total					60

[3] **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.

Year 3 - FHEQ Level 6
You must choose at least 3 modules from group A+B, and at least 2 computing modules from group DoC. In total you must take 7 modules from the combined A+B+DoC group. You must take one iExplore module. All students must choose 1 module from group P.

Code	Module Title	Core/ Elective	Group	Term	Credits
	Advanced Mathematics for Signal Processing	Elective	A	1	5
	Artificial Intelligence	Elective	A	1	5
	Machine Learning	Elective	A	1	5
	Communication Systems	Elective	A	1	5
	Communication Networks	Elective	A	1	5
	Digital Signal Processing	Elective	A	1	5
	Control Engineering	Elective	A	1	5
	Embedded Systems	Elective	B	2	5
	Digital Systems Design	Elective	B	2	5
	Advanced Signal Processing	Elective	B	2	5
	Real Time Digital Signal Processing	Elective	B	2	5
	High Level Programming	Elective	B	2	5
	Deep Learning	Elective	B	2	5
	Computing Modules	Elective	DoC	1,2	5
	I-Explore	Compulsory		1 or 2	5 or 7.5
	Group Consultancy Project	Elective	P	3	20
	Individual Industrial Placement	Elective	P	3	20
Credit Total					60 or 62.5

Year 4 - FHEQ Level 7
You must choose at least 2 modules from group A+B and at least 2 modules from group DoC, with a total of 6 modules from the A+B+DoC group. You must also take 1 module from group C. You must take the individual project and the Professional Portfolio & Summer Placement.

For the Year Abroad Programme the final year is spend at a University outside of the UK

Code	Module Title	Core/ Elective	Group	Term	Credits
	Adaptive Signal Processing and Machine Intelligence	Elective	A	1	5
	Predictive Control	Elective	A	1	5
	Human-Centred Robotics	Elective	A	1	5

	Selected Topics in Computer Vision	Elective	A	1	5
	High Performance Computing for Engineers	Elective	A	1	5
	Mobile Healthcare and Machine Learning	Elective	A	1	5
	Pattern Recognition	Elective	A	1	5
	Wireless Communications	Elective	A	1	5
	Topics in Large Dimensional Data Processing	Elective	A	1	5
	Modelling and Control of Multi-body Mechanical Systems	Elective	A	1	5
	BPES Modules	Elective	C	1 or 2	5
	IDX Modules†	Elective	C	1 or 2	5
	Horizons Modules	Elective	C	1 and/or 2	5 or 7.5
	Discrete-time Systems and Computer Control	Elective	B	2	5
	Advanced Communication Theory	Elective	B	2	5
	Coding Theory	Elective	B	2	5
	Stability and Control of Nonlinear Systems	Elective	B	2	5
	Wavelets and Applications	Elective	B	2	5
	Sustainable Electrical Systems	Elective	B	2	5
	Probability and Stochastic Processes	Elective	B	2	5
	Power System Economics	Elective	B	2	5
	Digital Image Processing	Elective	B	2	5
	Digital Signal Processing and Digital Filters	Elective	B	2	5
	Speech Processing	Elective	B	2	5
	Design of Linear Multivariable Control Systems	Elective	B	2	5
	Systems Identification	Elective	B	2	5
	Optimisation	Elective	B	2	5
	Information Theory	Elective	B	2	5
	Discrete-event Systems	Elective	B	2	5
	Traffic Theory and Queuing Systems	Elective	B	2	5
	Computing Modules	Elective	DoC	1 or 2	5
	Professional Portfolio and Summer Placement	Core		1,2,3,	20
	Individual Project	Core		1,2,3	35

Credit Total	90 or 92.5

* ‘Group’ refers to module grouping (e.g. a group of electives from which one/two module(s) must be chosen).

†There are multiple IDX modules available: https://www.imperial.ac.uk/engineering/study/current/inter-departmental-exchange-idx/

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 which options are available to you 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 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. The pass mark in the fourth and final year is 50.00%.

In order to progress to the 4th year of the MEng degree you must have achieved a minimum of 50.00% in the weighted total mark over 3 years.

In order to progress to the year abroad, you are normally required to achieve the following minimum marks:

1. a) 55.00% in mathematics.
2. b) 55.00% in the module total.
3. c) No module/practical component mark below 40.00%.
4. d) No compensation.

Compensation

Compensation is the practice of allowing marginal failure of one or more modules, on the basis of good overall academic performance. A compensated module will receive the pass mark. Core modules cannot be compensated.

The Year Abroad cannot be compensated.

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 the weightings are:

Year 1	7.50%
Year 2	20.00%
Year 3	36.25%
Year 4	36.25%

he College sets the class of undergraduate degree that may be awarded as follows:

First	70.00% or above for the average weighted module results
Upper Second	60.00% or above for the average weighted module results
Lower Second	50.00% or above for the average weighted module results
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

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.

Policies and regulations may vary for students on a year abroad. You are encouraged to familiarise yourself with the relevant policies and regulations which will underpin your studies while abroad before you go. If you have any questions, please talk to your host institution or your home departmental contact.

Supporting Information
The Programme Handbook is available at: http://www3.imperial.ac.uk/electricalengineering/teaching/undergraduate
The Module Handbook is available at: http://www3.imperial.ac.uk/electricalengineering/teaching/undergraduate
The College's entry requirements for postgraduate programmes can be found at: www.imperial.ac.uk/study/pg/apply/requirements
The College's Quality & Enhancement Framework is available at: 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
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/
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 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