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Welcome!

Dear DE undergrads,

The MEng in Design Engineering helps you develop a diversity of skills and expertise. We are excited at the opportunity of working with you over the coming years as you enter the world of design engineering and contribute towards the development of society and the domain.

This document serves a number of purposes including helping to introduce you to key information which will be helpful during the welcome week and as you settle in. In addition the document provides an overview of the MEng in Design Engineering which will be useful throughout your degree programme. The document has been developed with input from several staff members and is updated regularly so do source the online version for the latest information.

As a student of Imperial College London, the Students’ Union, fellow students, social media and staff are all part of your new network and we encourage you to engage with all of these, and we also encourage you to seek out the staff with your queries – it’s what we are here for.

Welcome to the MEng in Design Engineering.

All the best,

The DE staff.
Meet the Dyson School Teaching Staff

Professor Peter Childs
Head of School
p.childs@imperial.ac.uk

Professor Saeema Ahmed-Kristensen
Deputy Head of School
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Dr Lorenzo Picinali
Senior Lecturer
l.picinali@imperial.ac.uk

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Lecturer
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Dr. Leila Sheldrick
Lecturer
l.sheldrick@imperial.ac.uk

Ms. Hawys Tomos
Visiting Teaching Fellow
h.tomos@imperial.ac.uk
Welcome to Imperial College!
Here’s a quick-reference guide for your first week or two as an undergraduate student of the Dyson School of Design Engineering: please read it before you arrive and then you will regularly need to refer to it for key information.

1. Settling In
1.1 Welcome Week

The first week of your first term at Imperial will be a busy one, for which you will be given a separate timetable upon arrival. Some of the events and requirements need planning. Please read this section now.

ID Cards

The College–wide security system of ID swipe cards controls and monitors access to halls of residence, and to the School building and certain rooms outside normal hours. Your ID card will be your passport for the duration of your course: get it as soon as you can, and treat it with respect.

Once you have registered, the way you obtain your ID card will depend on when you arrive, and where you will be living. If you arrive after Week 1, you will need to take your Registration Confirmation page to Security (located on Level 1 of the Sherfield Building next to the HSBC cash machine) — where they will take your photo and issue the ID card. Otherwise:

If you will be living in College accommodation and...

- If you uploaded a photo when you registered, you will be issued with your ID card by the Hall Warden at the hall Safety Briefing.

- If you did not upload a photo, your Warden will issue you with a guest card, valid for a limited time only. To obtain a fully validated ID card you will need to take your Registration Confirmation page to Security (see above) to get your picture taken. If you can do this during week 1, the ID card will be sent to the DE UG Office (10 Princes Gardens, First Floor) from where you can collect it.
Chapter 1. Settling In

If you will be living in private accommodation and...

- If you uploaded a photo when you registered and you arrive during Week 1, you should collect your card from the DE UG Office (Level One, 10PG); or

- If you did not upload a photo and are arriving in week 1, you must take your Registration Confirmation page to Security to get your picture taken. The ID card will then be sent to the UG Office (Level 1, 10 Prince’s Garden) where you can collect it.

**IMPORTANT**
Lending your swipe card to friends or acquaintances, even for a short time, is a serious offence which can result in your being asked to leave the College permanently. Never, ever lend your card knowingly to a third party.

**Information on ID cards (LINK)**

**How to Register (LINK)**

**Fees**

If you are still due to pay fees immediately before Welcome Week, you should pay online if possible. You can do so in person during the weekend before Welcome Week.

The Student Hub (Level Three, Sherfield Building) will be open over the arrivals weekend between 09:00–17:00. Any last-minute queries can be answered here, and there are facilities for payment of fees.

**IMPORTANT**
The Hub cannot accept cash payments. If possible, you are strongly encouraged to pay online.

**Pay tuition fees online (LINK)**

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**Safety**

Design engineers make things, test things and deal with potentially dangerous quantities, e.g. chemicals, power, energy, force, pressure, mass and velocity. To be a professional engineer your consciousness of risk, and concern for your own and others’ safety, must be considered and instinctive. We will emphasise this from day one. Very soon after registration, every student must attend the School Safety Briefing. This will cover all of the absolute essentials including first aid, fire drills and security.

**IMPORTANT**
The College is required, under the Health and Safety at Work Act (1974), to formally acquaint all its members with their legal responsibilities for the maintenance of their own safety and that of others. You must read and understand the linked Health and Safety Policy Statement, and will be required to sign a form to say that you have.

Failure to attend the Safety Briefing will forfeit the protection offered by the Act and render you vulnerable to personal prosecution in the courts. In any event, you will certainly not be allowed to work in the School workshops and laboratories.

**College Safety Policy statement (LINK)**
1.2 Meeting Your Personal Tutor

As one of a group of four or five you will be allocated to a member of staff who will act as your Personal Tutor (see also page 21). You will meet him/her regularly during the session — in groups and/or individually — to discuss both academic progress and personal topics.

You will find the name and email address of your Personal Tutor in the information pack you received during Welcome Week.

If you are in your first year of study, you and your group will be meeting your Personal Tutor four times during the Autumn and Spring Terms, and three times during the Summer Term.

If you are in the second, third or fourth year, you will be meeting your Personal Tutor two times during each of the three Terms. These meetings will be timetabled, and you will receive information about days, times and locations in the Welcome Week.

If you are in need of an individual meeting with your Personal Tutor, you can contact him/her via email and arrange for a day, time and location. Please do not hesitate to do this, as the information that your Personal Tutor can supply about your general progress throughout your time here, and any special difficulties you might have experienced can be of invaluable advantage to you when decisions affecting your future have to be made. They may also write you reference letters.

If, for whatever reason, you are unable to contact or establish a good rapport with your Personal Tutor, please talk to the Senior Tutor (Dr. Lorenzo Picinali (EMAIL) - see page 20) who may be able to help resolve this.

1.3 Support for the Academic Transition

Students who join Imperial are all academically able, but they come from a wide range of secondary education cultures. Adjusting to the challenge of higher education can be tough, and we offer some special resources to support you.

First and foremost, please take time to explore the new Imperial Success Guide site.

This was put together from a vast amount of collective experience — above all that of many students who were asked what was needed to empower and support them as they started university. The guide brings together information on effective study, assessments and feedback, wellbeing, workshops and support to ensure that you know where to look for advice and guidance on study skills.

The Imperial Success Guide (LINK)

English Classes for Overseas Students

The undergraduate course involves a substantial amount of reading and writing, as well as oral presentation. Fluency in English is vital if you are to be successful in the course. The Centre for Academic English runs a series of English classes in the evenings for students who need tuition and practice.

IMPORTANT
Failure to attend these classes could result in your not understanding the lectures and failing the year’s assessments (i.e. projects, end-of-Term exams, essays and reports, etc.)

Centre for Academic English (LINK)
This chapter contains information about health services, staying secure in college, extracurricular activities (via Imperial Horizons and the Student Union) and taking care of your wellbeing.
2.1 Health Services

A list of College health and welfare services is posted throughout the School and College. You will probably need to make little or no use of these services, but you should register as an NHS patient with the Health Centre within the first few weeks of term.

Health Centre

The College has its own Health Centre that is only for Imperial Staff and Students. This is run by the National Health Service (NHS).

Registration
On the Sunday before Welcome Week, the Health Centre will be open for students in local halls of Residence to register, and to provide information on vaccinations if required. Health centre staff will also be working late sessions on Monday, Tuesday, Wednesday and Thursday of Welcome Week for new registrations and immunisations.

Address
40 Prince’s Gardens Southside, Watts Way, London, SW7 1LY
24-hour telephone service
+44 (0)20 7584 6301
Emergencies
(Security) 4444 (internal)
020 7589 1000 (external)
Internal extension
49375/6

Term time opening hours
08.00–18.00 Monday, Wednesday, Thursday and Friday.

Vacation time opening hours
08.00–17.00 Monday, Wednesday, Thursday and Friday.
08.00–13.00 Tuesday.

Closed
At weekends and on public holidays.

On weekdays during the Christmas and Easter closures, the Health Centre runs an emergency clinic only, 08.00–10.00. Reception is open 08.00–13.00.

Out of Hours Services

If you are registered with the Health Centre as a National Health Service (NHS) patient, and need medical advice outside normal opening hours please telephone the surgery as usual. Follow the recorded instructions which explain how to contact its out-of-hours service.

The Health Centre provides a 24-hour emergency service for its NHS registered patients only.

If you are not eligible to register there, you may use its on-site services during normal working hours only. Make sure you are registered with an NHS General Practitioner near where you live during term, in case you need the doctor to visit you there or need medical advice out-of-hours.
Nearest Accident and Emergency (A&E) Departments

Chelsea and Westminster Hospital
369 Fulham Road London SW10 9NH

St Mary’s Hospital
Praed Street, London W2 1NY

**IMPORTANT**
Accident and emergency (‘A&E’) departments should only be used for accidents and emergencies. If your problem is not a true emergency, or you are unsure of what to do, please contact the health centre out-of-hours service.

2.2 Security

Imperial is a relatively public space, and, sadly, thefts do occur from time to time. It is essential to look after your own property and to remain vigilant. Take great care of both your personal property and that of the College.

Laptop lockers are available in Breakout and Study (BOS) Space on Level 3, 10 Princes Gardens.

If you are planning to use a bicycle in London, please be careful and lock it securely. You can find more information about this at the link below.

**IMPORTANT**
If you lose anything, report it promptly to the security officer in Sherfield building (ref. 20 on campus map, internal tel. 4444). It is especially important to report a lost or stolen id card. If you find an ID card or any apparently lost property in the school, please hand it into the undergraduate office or postgraduate office.

2.3 Imperial Horizons

Looking to get the most out of your degree? Imperial Horizons is a programme designed to broaden your undergraduate education, inspire your creativity and enhance your professional impact. The courses are popular and highly rated by students: make your choice and sign up quickly!

You can choose from more than 20 different course options in the following four fields of study:
- Business & Professional Skills
- Global Challenges
- Science, Culture and Society
- Languages and Global Citizenship

**Key benefits**
- Give yourself a unique edge – These courses will give you opportunities to develop your skills in communication, problem-solving and teamwork.
- Make your degree transcript stand out – Imperial Horizons courses are included on your degree transcript as a valuable selling point for employers.

**Study for free during normal teaching hours**
All Departments have set aside time for Imperial Horizons:
- 1st Years: 16.00–18.00 on Tuesdays
- 2nd Years: 16.00–18.00 on Mondays
- 3rd / 4th Years: 16.00–18.00 Thursdays

**IMPORTANT**
First years must register their course preferences on the Imperial Horizons website during Welcome Week, before the deadline of Monday 10th October 2016. Imperial Horizons is a set of extracurricular and non-compulsory activities that are not credited towards your degree.

**Security website (LINK)**

**Securing your bike (LINK)**

**Info on Imperial Horizons Courses (LINK)**
2.4 Imperial College Union

Every student who registers at Imperial College London automatically becomes a member of the Students’ Union. As well as providing an overall framework for student representation, ICU provides a wide range of information, facilities and social events.

Student Union Welfare and Advice Centre

The Advice centre is your first port of call if you are experiencing difficulties during your time at university.

Their advice is:
- **Free**: you don’t have to pay to get advice
- **Confidential**: they won’t tell anyone that you’ve gone to see them and they won’t share with anyone else what you tell them unless in exceptional circumstances (see their confidentiality policy on their website, below.)
- **Impartial**: they offer the advice that is best for you, they are not influenced by any other organisation
- **Independent**: They are not part of the Imperial College so their advice is not influenced by The College or School.
- **Non-judgemental**: as long as you are a student they will offer the best advice they can give you and they will not judge your position or the next step you decide to take.

Staff-Student Consultative Committee (SSCC)

This meets termly. Members of the SSCC include all the Student Reps (all years + School Reps), and representatives from DE staff (Head of School, Director of Undergraduate Studies, and Examination Officer).

Clubs and Societies

This is a demanding course and we expect you to work hard; but we hope you will ‘play hard’ as well. Opportunities range from the hundreds of student societies to the social and cultural resources of one of the world’s greatest cities.

Since there are over 8000 undergraduate students at Imperial, it is virtually certain that your interests – however unusual – will be shared by others. The clubs and societies formed by students and supported by Union funding will be competing to attract
new members at the Union Fair on the first Tuesday of autumn term. More than 300 societies are affiliated to the Student Union, and every one of them will want you to join. We hope you will join the Imperial College Design Collective (ICDC) which was instrumental in helping in the formation of the Dyson School of Design Engineering. You may also wish to consider joining ICAH, the Imperial College Advanced Hackspace and the Imperial College Robotics Society (ICRS).

London offers an incredible range of entertainment and culture, both nearby and further afield. The substantial price reductions available to students make this expensive place extremely good value.

Take advantage of being here: few of you will have a second chance of university education.

**CAUTION**

Be selective — don’t fall into the trap of trying to do too many things! There are only 168 hours in every week.

- Imperial College Advanced Hackspace (LINK)
- Imperial College Robotic Society (LINK)
- Imperial College Union Design Collective (LINK)
- IC Union clubs and societies (LINK)

### Chapter 2. General Information

#### 2.5 College Support and Welfare

Coming to Imperial can be quite daunting if you are moving away from home for the first time — especially if you are also new to this country. The College is probably bigger than any institution you’ve attended before, and the freedom of life in it is immense. The culture shock can be a challenge, but there are resources at both School and College level to help you face it.

A single website (link at the end of this section) now coordinates access to the entire range of support and welfare services offered by the College and the Students’ Union.

The main areas covered are:
- Academic appeals and regulations
- Careers Advisory Service
- Chaplaincy
- College Hardship/Access to Learning Funds
- College Tutors
- Director of Student Affairs
- Disability Advisory Service
- English language support
- Equality
- Health Centre
- ICU Advice Centre
- ICU student representation
- International student support
- Maths support (METRIC)
- NHS Dentist Student
- Counselling Service
- Wardens

**Student Space (LINK)**

### The Disability Advisory Service

The School Disability Liaison Officer (Andy Brand - andrew.brand@imperial.ac.uk) can provide advice, support and referral to the College-wide Disability Advisory Service. The Disability Advisory Service works...
with individual students, no matter what their disability, to ensure that they have the support they need. It can also help if you think that you may have a previously unrecognised study problem such as dyslexia. The service is both confidential (information about you is only passed on to other people in the university with your agreement) and individual in that any support is tailored to what you need.

Disabled Students’ Allowance (DSA). If you are classified as a Home student for fees and have a disability you can apply for a grant called the Disabled Students Allowance, which can pay any extra costs that are a direct result of disability. This fund is not means-tested and is also a grant not a loan so any home student with a disability can apply and will not be expected to pay it back.

**Disability Advisory Service (LINK)**

**Coping with Stress**

Stress — in this context an adverse reaction to excessive pressure from work and your environment — affects many of us, staff included. Coping with it effectively is an essential life skill, and learning to do so will be a valuable part of your education. The College offers extensive help.

Support is on hand at a number of levels. The workload at Imperial is high, and is likely to be a major factor in how you feel — especially, of course, as exams approach. If you are struggling, talk to your personal tutor first. Both the Academic Tutor and the Senior Tutor can help you to untangle the work and personal factors on you.

**IMPORTANT**

*Don’t leave things too late! Seek help before things get on top of you: there’s nothing to be ashamed of in requesting help.*

Exams and coursework and project deadlines, of course, are stress concentration factor number one. The Health Centre offers a wide range of resources to manage exam stress and anxiety, including even general guidance on revision and study techniques. It also runs Exam Stress Workshops from November onwards, allocating places on a first-come, first-served basis.

We understand that life here can sometimes look like the diagram above. Please don’t let it get like this.
Design Engineering is the fusion of design thinking, engineering thinking and practice within a culture of innovation and enterprise. The Dyson School of Design Engineering is the 10th and newest engineering department at Imperial College London, formed in July 2014, building on long-standing design and engineering expertise at Imperial.

3. Dyson School Information
3.1 About the School

Design engineering concerns the design of products, services, systems, as well as experiences and artefacts relevant to designing and enabling modern society and the society of tomorrow.

Design engineers are problem solvers who bridge the gap between traditional engineering and design to create innovative solutions to modern challenges, from improving passenger comfort on commercial airlines to designing next-generation sports prostheses.

It’s a highly creative discipline that draws on knowledge of manufacturing techniques, product development, technical design and rapid prototyping to bring new innovations to market, and to improve existing products and the processes used for making them.

The MEng in Design Engineering will seek to integrate fundamental content from other engineering disciplines into the initial years of study alongside business and design modules.

This approach is intended to enable students to specialise in later years through electives, taking on modules from other engineering departments on a comparable footing to students of those departments.

3.2 Key Contacts

Most of our academic staff and many other members of the School are engaged in teaching, but as an undergraduate student there are a few you will see and hear much more of.

There will usually be someone in Studio One, 10 Prince’s Gardens on Monday – Friday 0930-1700 during term time. However, all the staff that are based there are sometimes away from their desks, therefore whenever possible, you should contact the person you wish to speak with via email ahead of time and arrange an appointment.

Head of School (HoS)
Professor Peter Childs
Studio 1, First floor, 10 Princes Gardens
p childs@imperial.ac.uk
The Head of School is responsible to the University for all of the School’s activities, both teaching and research.

Deputy Head of School
Professor Saeeema Ahmed-Kristensen
Studio 2, First floor, 10 Princes Gardens
s ahmed-kristensen@imperial.ac.uk
Chapter 3. Dyson School Information

Director of Undergraduate Studies (DUGS), Senior Tutor and Y1 Co-ordinator

Dr Lorenzo Picinali
Studio 2, First floor, 10 Princes Gardens
l.picinali@imperial.ac.uk

The Senior Tutor is responsible for the welfare and academic progress of every undergraduate student in the School.

The DUGS is responsible for all the undergraduate programmes in the School.

Undergraduate and Postgraduate Officer

Alex Marsh
Studio 1, First floor, 10 Princes Gardens
a.marsh@imperial.ac.uk

The UG & PG Officer is responsible for managing the interaction of students and teaching programmes. Dealing, in particular, with timetabling and registration issues.

Year 2 Co-ordinator

Dr Mazdak Ghajari
Studio 2, First floor, 10 Princes Gardens
M.Ghajari@imperial.ac.uk

The Year 2 co-ordinator is responsible for the planning and implementation of the DE2

Disability Officer

Andy Brand
Studio 2, 10 Princes Gardens
andrew.brand@imperial.ac.uk

The School Disability Officer is your first point of contact if you have a physical or learning disability that requires additional support such as special exam arrangements.

UG and PG Administrator

Jen Cooley
Studio 1, 10 Princes Gardens
j.cooley@imperial.ac.uk

Technician

Ingrid Logan
Ideas Lab, 238 Skempton Building
i.logan@imperial.ac.uk

Technician

Tony Watson
Ideas Lab, 238 Skempton Building
anthonywatson@imperial.ac.uk
3.3 The Undergraduate Office (UG Office)

Until you graduate, the UG Office will be your main point of contact with the School.

For any general queries, the UG Office (Studio 1, First floor, 10 Princes Gardens) is the place to start. You will hear a lot from the UG Office — mostly by email — during the course of your studies.

Please read emails carefully as they provide vital information on lectures, assessment and other topics of real importance to you. We do try to keep such alerts to a bare minimum and where possible will update you via the Blackboard Virtual Learning Environment (VLE).

There will usually be someone in Studio One, 10 Prince’s Gardens on Monday – Friday 0930–1700 during term time. However, all the staff that are based there are sometimes away from their desks, therefore whenever possible, you should contact the person you wish to speak with ahead of time and arrange an appointment.

3.4 The Senior Tutor

The Senior Tutor is responsible for the welfare and academic progress of every undergraduate student in the School, and works with the student representatives to ensure your course is running as smoothly as possible. They can offer personal advice and help to any student on both academic and non-academic matters.

The Senior Tutor is also on call during vacations but if for any reason they are unavailable, or you are unsure about who to talk to on a particular issue, please ask any staff member in the UG Office and they will decide who is best able to help you.

One responsibility of the Senior Tutor’s team is to maintain records for each student so that, for example:

- You can be notified of your examination results
- You can provide evidence of problems such as ill health, for it to be presented to the Board of Examiners.

Your student file is strictly confidential to the Senior Tutor and his team; no-one else is allowed to consult it.
3.5 Personal Tutors

Your personal tutor will, as much as possible, stay with you from year to year and will probably become the staff member you know best. Both of you should maintain the relationship: you may need their help and support, and s/he will need to know both your academic and personal qualities in order to act later as your referee.

To help your tutor get to know you, he/she will have access to your attendance data, your grades and, where needed, your coursework and exams: this will provide one opportunity to review and discuss your academic work and your progress during the year.

You should feel able to contact your personal tutor via email at any time.

3.6 Joining Professional Institutions

We are currently seeking accreditation for the MEng in Design Engineering from the following professional institutions:

- **IET** ([The Institution of Engineering and Technology](https://www.iet.org))

Due to the fact that this is a new course, full accreditation can only be obtained when the MEng in Design Engineering will have its first graduates, therefore in Summer 2019.

We strongly encourage you to make use of student membership for these three institutions: there are very low (IET) or no membership fees (IMechE and IED) until you graduate.

Professional institutions memberships will allow you to get support and guidance at each stage of your career, providing you with a professional home for life. Please refer to the Internet sites linked above in order to get more information about the joining process.

- **IMechE** ([The Institution of Mechanical Engineers](https://www ima org))
Many of the facilities you need for your studies are available within the School, but while we are setting up the School, we are also making use of facilities across the South Kensington campus.
4.1 Communications

Our primary channel for maintaining contact with you is via your Imperial College e-mail and by the Virtual Learning Environment (BlackBoard).

The email address issued to you on registration will remain active until one year after you leave Imperial. You can use this address freely to communicate with other students, staff and people outside the College. We try to email you no more than necessary, but messages will still be necessary — and some of these will be very important and, possibly, urgent.

Re-directing Imperial email to a non-Imperial address:
If necessary, ICT can redirect your mail to a colleague or to a non-Imperial email address (see Computers section for instructions)

Set Up Email Forwarding (LINK)

**IMPORTANT**
You must check your e-mail regularly for incoming messages. If you fail to read and clear your inbox regularly you may be unable to receive further mail: any resulting failure to read important communications will not be accepted as grounds for mitigation.

If you wish to see a member of staff, e-mail them or call at their studio; if they are not there leave a note and expect an e-mail reply.

Blackboard

Blackboard is the Virtual Learning Environment that will be used for all Design Engineering modules. Within Blackboard you will be able to find a section (module shell) for each of the modules you are currently enrolled in. In each module shell you will find information and materials about the specific module, such as the module handbook, lecture, exercise and tutorial notes, announcements, tests, videos, grade-book, etc.

Considering that we will use Blackboard as our primary channel for maintaining contact with you for modules, please check REGULARLY the module shell of each of the modules in which you are currently enrolled.

In the Blackboard homepage, on the right side under “My Organisations”, you can find the Design Engineering Information organisation page, where we will post relevant information about the School (e.g. announcements, student resources, etc), and a link to access the Starfish application (see following section).

You will be able to login into Blackboard using your Imperial College credentials.
There is also a Blackboard app available on all platforms. You are strongly advised to download this if you have an appropriate device (OSX / Android).

**IMPORTANT**

Some coursework will be submitted electronically via Blackboard. Once you have submitted your work on Blackboard, Blackboard will provide you with a preview of the file you have submitted. It is your responsibility to ensure that you have submitted the correct file. If you submit the wrong file in error and subsequently miss the coursework deadline, your work will be marked as late and you will receive 0% for the work.

Blackboard Login (LINK)

Starfish

Starfish is another online resource that will be mainly used for monitoring student attendance, but could also be used for other purposes, such as organising and monitoring personal tutorials, mentoring, and other activities. Every tutor will inform you whether additional functionalities of Starfish will be employed for his/her modules and/or tutorial sessions.

You are not required to access Starfish during the year, but it might interesting for you to explore its functionalities, therefore please feel free to login and give a look around. You will be able to access Starfish directly from your Blackboard account, from the “My Organisations” list on the right part of the homepage.

4.2 Computers

Laptops

In order to undertake the MEng in October 2016, you will need to have a laptop computer of the following minimum specification for some classes and coursework:

- Windows 10 capable
- Intel i5/i7 5th Gen processor
- 16Gb RAM
- 256 Gb SSD HDD
- NVIDIA K1100M or higher graphics card

If you do not have your own laptop, the Department has a number of HP laptops available for loan for the duration of your programme of study.

A deposit of £100 is required (this is less than 10% of the actual laptop value), refundable on return of the laptop at the end of your programme of study.

BlackBoard Login (LINK)

Starfish

At the beginning of your first year, you will receive a survey from the Dyson School of Design Engineering asking you to indicate whether you wish to loan a laptop from the School. It is essential that you respond to this survey. If you do require a laptop, you will be sent an invoice for £100 from the Student Finance Team ahead of the start of term.

If you receive a laptop via the School’s loan-scheme, you will be responsible for looking after it for the duration of your studies.

You will be responsible for basic laptop upkeep (protecting against viruses, security updates etc.) The College’s ICT Department runs a Laptop Surgery if you find that you require additional help.

If your loan-scheme laptop is lost or stolen you will not automatically be able to access a replacement via the School’s loan-scheme. Whilst we would likely supply you with a loan laptop on a short-term basis, if available, you would likely be responsible for the long-term replacement of your machine.

Imperial College Laptop Surgery (LINK)
ICT SUPPORT

Imperial College Information and Communication Technologies (ICT) provides general assistance with IT issues from a central Service Desk situated in Sherfield Building (Level 4 West).

You can contact the service desk personally (08.30 to 18.00, Monday to Friday, excluding College holidays), by phone (020 759 49000, internal 49000) or by email; however, the recommended method is to use the 24 hour Service Desk Online.

Contact the ICT Service Desk (LINK)
View conditions of use for IT services (LINK)
ICT advice to new users (LINK)

Software

Your laptop will come pre-installed with the programs that you will need for your first term and then additional software will be made available to you to install as and when it is needed.

Printing and Photocopying

It is possible to print to the communal college printers from your School issued private laptop. You will need your College ID card to do this. Detailed instructions on how to print are on the ICT website.

Printing to communal College printers and using the photocopiers costs money. You can purchase printer credits to charge your card at the Central Library or online.

Communal printers and photocopiers can be found in the Central Library.

Some projects may require that you design a poster to present your work. Posters can be printed at Service Point, the College’s on-site contractor for bulk and professional printing. Do ensure you allow sufficient time for the turnaround of printing tasks.

How to print (LINK)
Service Point (LINK)

Internet Access

Imperial College London provides and supports excellent access to the Internet, both on-site and in halls. However, this access is not unrestricted and its misuse, or its use for anti-social behaviour, are regarded as serious offences.

An account for access to IT facilities was created for you on registration, and you have been provided with a username and password for login and Internet access via Outlook, Internet Explorer and Firefox. If you forget your password and need to obtain a new one, you will need to produce a valid college ID card.

Mobile access to many services is available through the Imperial College Mobile app.

IMPORTANT
In your contract as a student you have agreed to abide by the Conditions of Use of IT Services. These conditions concern anti-social behaviour by which other users can be affected and areas of misuse which come under UK Law.

The College network extends to student halls and here, again, it is important to be aware of the restrictions imposed both by College regulations and by national law.

View conditions of use for IT services (LINK)
Information on Imperial College Mobile app (LINK)
4.3 Library

The College’s Central Library is next to the Sherfield Building. It provides access to high quality resources including electronic journals, databases, textbooks, print journals and maps. PCs and wireless access to the College computing network are also available.

Much more information is available on the library’s website, and you will be given an induction course during the first week of term.

Like every other department, we have a School Librarian to guide and support your access to central library resources.

The School librarian maintains a web page with a blog. They also have office hours for consultation (see the web page for details).

Nicole Urquhart - Design Engineering Librarian
Room 110 Central Library
Ext. 41889
n.urquhart@imperial.ac.uk

School librarian’s web page (LINK)
Library website (LINK)

4.4 Personal Protection Equipment (PPE)

The School has access to exceptionally good workshop facilities. To use them, you must be wearing suitable protective clothing — most of which will be issued to you. Before you attend the Student Workshop for the first time (in Summer Term of first year), you will be asked to provide height and weight details. Shortly afterwards, you will be provided with your own boiler suit and safety glasses.

You will also be provided with a white lab-coat, which you must wear when entering any of the other workshops or laboratories.

IMPORTANT
We do not charge for your first set of PPE, however if you need to replace any items for any reason, you will be charged the full cost of the item.

Shoes
You must also wear sturdy shoes. These must have a tough top to protect your feet from any heavy object that may fall on them, and thick soles to protect from any sharp object you may tread on. Anybody wearing open-toed shoes or sandals will be refused access.

IMPORTANT
When you are using any of the workshop machinery, you must wear the appropriate clothing and PPE. This is a school health and safety requirement.

Note
It is your responsibility to know when you should be attending laboratory or workshop sessions and to have adequate personal protection equipment available.
4.5 Workshops

The School has access to outstandingly good workshop facilities, some of which are situated in the Skempton building. The main facilities you will be using is called the IDEAs Lab located in SKEM 238.

Training

Before you can use any equipment in any of the Workshops you need to be appropriately trained. Induction sessions are scheduled throughout the MEng course.

Before the IDEAs Lab induction, all students will have to complete an online safety test on Blackboard, of which details will be provided in due course.

The IDEAs Lab technicians are Ms. Ingrid Logan and Mr Tony Watson. Please be courteous and professional with all workshop personnel that you interact with, as you will require their services much over the next four years. Mr. Andrew Wallace of the Mechanical Engineering Dept. is the safety officer for this facility and therefore will be ensuring best practice when working there.

PPE

To enter any workshop, you must be wearing a lab coat or boiler suit and relevant safety equipment (e.g. safety glasses and footwear etc.). (Please see Personal protection equipment 4.4 on p26).

Note

The IDEAs Lab does not include an area for changing, so before attending you will need to change in some suitable area, e.g. Mechanical or Civil Engineering Department washrooms.

Bags and coats can be stored outside of the IDEAs lab and should not be brought into the lab.

The IDEAs Lab

The IDEAs Lab offers facilities which focus the realisation of design concepts as prototypes — generally using a wide range of manufacturing processes and materials. The IDEAs Lab is located on the first floor of the Skempton Building.

The facilities offered are:

The IDEAs Lab Machine Tool Area
A rapid prototyping, craft and wood-working workshop equipped with up to 20 machine tools;

The IDEAs Lab Project Development Area
Bench space, fixed — comprising approximately 20 fixed benches; and

Bench space, flexible— this area has moveable tables, so the area can be set-up to meet the class’s particular needs.

The IDEAs Lab Machine Tool Area (SKEM 238W)
This is a defined space in the IDEAs Lab providing a machine tools area, resins room and a materials store. The machine tools include:

- panel saw
- band saw
- pillar drill
- laser cutter
- CNC router
- sewing machine
- Z-corp 3D printer
- CAD-CAM

Every user must undertake a formal induction, monitored by an attendance and completion list with signoff by the attendee and Workshop Manager.

Training on specialist machine tools will be provided by the Workshop Manager.

For each machine tool a training book must be completed, with a signature from the trainee and trainer to sign off that the former has achieved sufficient competence. A system of coloured dots is used to identify which machine tools a given student is authorised to use.

Technical advice on specialist rapid prototyping and CAD-CAM (Computer Aided Design/Manufacture) techniques will be provided by the School Head Technician (Ms. Ingrid Logan).

The IDEAs Lab Project Development Area – Bench space, flexible (SKEM 238F)
This space is much like the fixed bench space area, however the tables can be moved to create more floor space or specific table configurations when necessary.

This area has the same opening hours and supervision as the Bench space, fixed area (above).

Storage
Storage space in the IDEAs Lab is limited. Items may only be stored if, and where, agreed in advance by the IDE Workshop Manager and if clearly marked with the owner’s name, the supervisor’s name and relevant contact numbers along with dates defining the period of storage.

Chemicals cannot be stored in the IDEAs lab without the prior agreement of the School’s Technicians and the completion and signing off of a COSHH assessment.

Given the range of users and the limited storage facilities, appropriate clearing and cleaning during and after any IDEAs lab activity is absolutely essential. IDE Workshop staff will inspect daily and tidy as necessary: any items left out will be subject to disposal.

Email School Head Technician, Ms. Ingrid Logan:

i.logan@imperial.ac.uk

Download COSHH form/s (LINK)
## IDEAS Workshop - Facilities and Services

<table>
<thead>
<tr>
<th>Capability</th>
<th>Access method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General access to workshop</strong></td>
<td>Students may only use the IDEAS workshop after completing a safety induction and a recognised period of skills training. Suitable training is provided for all DE1, GID1 and IDE1 as part of the teaching programme. For all others including AME MSc, PhD and Exchange students, training must be organised separately.</td>
</tr>
<tr>
<td><strong>Laser Cutting and Etching</strong></td>
<td>LaserCam A2 60 W. For light materials such as plywood and MDF up to 6 mm, plastics and acrylics, card etc. No metals. Request to Technician. Provide own materials and .dxf file of profile or outline. Service is free for all DE taught courses.</td>
</tr>
<tr>
<td><strong>3D Printing</strong></td>
<td>Z Corp. Starch powder and binder visualisation models only. Some post impregnation but low strength. Request to Technician. Provide solid model file of object. Service is free to all DE taught courses.</td>
</tr>
<tr>
<td><strong>CNC Router</strong></td>
<td>Unimatic. For producing 3D machined models and parts in light materials such as model board and foam. Request to Technician. Provide own materials and solid model file of object. Service is free to all DE taught courses.</td>
</tr>
<tr>
<td><strong>Vacuum Forming</strong></td>
<td>Small format vacuum forming in light thermoformable polymers up to 6 mm in thickness. Request to Technician. Provide own materials and discuss mould tool manufacturing method with technician. Service is free to all DE taught courses.</td>
</tr>
<tr>
<td><strong>Resin Room</strong></td>
<td>For working with epoxy resins etc. Any activity requiring ventilation or fume extraction. Technician supervised activity, only available during working hours. Students must complete short induction and provide COSHH/MSDS safety data sheets for materials and technical specification sheet. Toolkits</td>
</tr>
<tr>
<td><strong>12 Tool boxes</strong></td>
<td>During supervised hours toolboxes and cordless tools are made available upon request. Both items are provided on longer term loans by a booking system. Individuals are then responsible for losses or damage of items.</td>
</tr>
<tr>
<td><strong>Cordless hand tools</strong></td>
<td>A selection of cordless tools are available for use. Battery charging points are provided in the store room.</td>
</tr>
</tbody>
</table>

---

*IDEAS Workshop - Facilities and Services*

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**Chapter 4. Facilities**
<table>
<thead>
<tr>
<th>Capability</th>
<th>Access method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust Extraction</td>
<td>Workshop has 2 provisions:</td>
</tr>
<tr>
<td></td>
<td>• Downdraught air benches for desktop work must be used for all small and</td>
</tr>
<tr>
<td></td>
<td>portable objects</td>
</tr>
<tr>
<td></td>
<td>• Portable vacuum units are available for all larger immovable items.</td>
</tr>
<tr>
<td>Project storage</td>
<td>Small storage boxes are provided for all individual and group projects and</td>
</tr>
<tr>
<td></td>
<td>are allocated on request to a Technician.</td>
</tr>
<tr>
<td></td>
<td>Rack space is provided for larger format project work.</td>
</tr>
<tr>
<td>Consumables</td>
<td>All these items are kept in the central storeroom. The room is open during</td>
</tr>
<tr>
<td></td>
<td>supervised hours and accessible by door combination outside of supervised hours.</td>
</tr>
<tr>
<td></td>
<td>Door combination number is available upon request.</td>
</tr>
<tr>
<td></td>
<td>Caution</td>
</tr>
<tr>
<td></td>
<td>Do not wedge door open outside supervised hours.</td>
</tr>
<tr>
<td>Hand tools</td>
<td>A selection of hand tools are available for use.</td>
</tr>
<tr>
<td>Machine tools</td>
<td>All machine tools in both the STW and IDEAs workshops are colour coded:</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="RED spot" /> For use only by workshop technicians only (e.g. circular</td>
</tr>
<tr>
<td></td>
<td>saws, CNC machine tools).</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="AMBER spot" /> For use by students under the supervision of a technician</td>
</tr>
<tr>
<td></td>
<td>and after the completion of the necessary training and induction (e.g. band</td>
</tr>
<tr>
<td></td>
<td>saws, lathes, milling machines).</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="GREEN spot" /> For use by students without the supervision of a technician</td>
</tr>
<tr>
<td></td>
<td>but after the completion of induction (e.g. Cordless power tools).</td>
</tr>
</tbody>
</table>
The Student Teaching Workshop (STW)

The STW will play a part in your training as a design engineer. It offers a wide range of facilities, and your use of them will evolve from year to year through the programme. The Teaching Workshop is found on the entry floor level of the Skempton building at its north-western corner (building 28: see Appendix A – Campus map page 64). Access is by swipe card.

Opening hours are 08.30–16.30 daily, closed 12.30–13.30.

The workshop is equipped with 20 benches and a range of machine tools, both manual and CNC (Computer Numerical Controlled).

It is designed primarily for manufacture from metals (steels and cast irons, aluminium and brass) and engineering plastics, and is not suitable for wood or composites. A COSHH (Control of Substances Hazardous to Health) safety data sheet may be required for manufacture from other materials.

NOTE
There is a charge to use the metal CNC facilities in the STW. The wood CNC facilities in the IDEAs Lab are free.

A wide range of materials and stock parts can be obtained directly from, or ordered through, the workshop stores. Payment is made through the College system and you will need to have a project code: ask your supervisor or module leader. Before you can use workshop facilities, staff will need to establish your competence.

Unless you can provide evidence of previous workshop training, you will need to attend specific training sessions for using the STW. These will be organised, when needed, during the four years of the course.

4.6 Project Work in Research Labs

College and School health and safety rules dictate that students on taught courses may only work in laboratories during technical staff hours — i.e. between 08:30–17:00, Monday to Friday, while the College is open. Even outside these hours, no-one is permitted to work alone unless the work has been declared (in writing) to be non-hazardous, and authorised by his or her supervisor and the laboratory manager — otherwise, a second person must be present.

NOTE
For some laboratories, ‘lone working’ permission is never given.
4.7 Lecture Theatres

Until the Dyson Building works are completed, we will be making regular use of other departments’ lecture theatres and rooms. Details of which rooms you need to attend will be clearly listed on your calendar. Appendix A of this document is a map of our South Kensington Campus.

The rooms that we will use most frequently are:

- **Electrical and Electronic Engineering Building – lecture theatre and labspaces** (no. 16 on map)
- **SKEM 237 “Pink Room”** Skempton Building (no.27 on map)
- **254 Roderick Hill Lecture Theatre** (no.7 on map, please see note below re: this room)
- **Royal School of Mines, rooms G06 & G39** (no. 9 on map)
- **Slann Room** 10 Prince’s Gardens, Level 4.
- **Meeting room space – Student Union Beit Quad** (no. 2 on map)

**IMPORTANT**
Lecture and tutorial rooms may change week to week. Always check which room your class is being held in each week.

**FINDING RODERICK HILL LECTURE THEATRE**
A lecture theatre that we will be using quite frequently is Roderick Hill 254. This can be a little hard to locate the first time, so there are detailed instructions on how to find the room below:

[Appendix A - Map on p64](#)
[How to find Roderick Hill 254](#)

4.8 Lockers

In the Breakout Space on 3rd Floor, 10 Princes Gardens, there are 30 laptop lockers which will operate on a gym style, first-come-first served basis.

Otherwise you will be responsible for storing the necessary books and equipment for your courses and ensuring that you bring the correct items with you to classes and sessions.

4.9 Breakout and Study Space (BOS Space)

There is a student breakout and study space, suitable for informal study, on Floor 3 of 10 Princes Gardens. It comprises of some PC/laptop benching, comfortable seating and meeting spaces.

This is also where the laptop lockers are located.

**4.10 Catering Outlets**

On South Kensington Campus, there are catering outlets in the Sherfield Building, the Union Building and the Library, as well as a supermarket and the Eastside bar (which also serves meals) in Princes Gardens.
4.11 Banking and ATMs

There is a branch of Santander on Level 1, Sherfield Building.

There are also cash machines in the Level 1 concourse of the Sherfield Building and in the Mechanical Engineering concourse and in the ‘Essentials’ shop at Eastside hall.

4.12 Bicycle and Car Parking

Cycling in London is not easy, but there are many secure bike parking spaces on campus. Driving a car is even more difficult and parking spaces are virtually non-existent.

There are five designated bike parking areas of which one of the closest, with 600 spaces, is under the Faculty Building (the ‘blue box’, number 22 on Appendix A – Campus map page 64) behind the City and Guilds building.

Car parking space on the College site is very limited, and availability varies as spaces are used for building and maintenance work. If any spaces are available for students then they will be administered by the Student Union.

**IMPORTANT**

Public transport links to and from the campus are excellent: we strongly advise that you do not bring a car to the College.

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**Bike locks**

High quality D-locks for securing your bike can be bought at a discounted price from Imperial Security office.

You may also be interested in the LiteLok product developed by one of our alumni. These are designed to be lightweight and flexible whilst still meeting the gold standard for security.

[www.litelock.com](http://www.litelock.com)

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Information on Bike Parking facilities (LINK)

Transport for London website (LINK)
The study techniques which brought you success in your school qualifications may not work so well at University. The Imperial Success Guide site offers excellent general advice on study skills for higher education, but some of it may need to be adapted for Design Engineering.

5. Study
The aims and methods of secondary education address general knowledge and development, and involve diverse teaching processes, designed to achieve general education. Higher Education, on the other hand, is designed to give you lifelong skills for learning autonomously, helping you take responsibility for your own development. The transition from ‘being taught’ can be a difficult one, and will take 3–4 years. Steady and effective study from the beginning is essential if you are to build a sure foundation for DE1 and beyond.

**IMPORTANT**

In your previous studies (e.g. for A-levels) you may have done virtually all your intensive work near the end of the year. In higher education, this technique is extremely unlikely to work.

**The Imperial Success Guide (LINK)**

### 5.1 Teaching and Learning Methods

Several main methods of teaching and learning are used in undergraduate programmes. The mix varies widely between modules and from year to year and is specified in detail in the module description.

#### Lectures

For some modules, the knowledge and skills you will need to learn will be introduced and explained at a series of whole-class lectures. All the outline handouts you require should be provided, but you will need to annotate and build around them in the way which best supports your personal learning style.

Higher education cannot be achieved by memorising lecture notes. Mastering the necessary knowledge and skills will demand understanding them, so that if necessary you could explain them to others. This involves both learning alongside others, and reading alternative presentations of the same material by others who have already mastered it. Some of the lectures given in theatres are equipped with Panopto, which allows to record the lecturer and presentation. Panopto videos can be viewed directly via the course Blackboard page or the general Panopto page.

**Note**

If a session is being recorded and for any reason you do not wish to be part of that recording, please sit in an ‘off-camera’ area (ask the lecturer if you are in doubt) — and reserve any questions to the lecturer until recording has ended.

Many students find lecture videos a valuable resource for review and revision. However, a recording cannot possibly replace the shared learning experience of the live lecture, and cannot be relied on for completeness. Occasionally, video capture partially or completely fails.

**IMPORTANT**

It is the School’s intention to make Panopto recordings whenever the facilities allow this. However not all College teaching spaces are fitted with the necessary facilities, so you must not rely on being able to view recordings after the fact.

**IMPORTANT**

Lecture recordings are provided only for personal use by registered Imperial College students, and only for educational purposes.

Any redistribution (e.g. via social media), sharing (even by email), editing or re-use of a lecture video will be treated as misconduct and handled as a disciplinary matter under the Code of Student Discipline.
5.2 Tutorials

Tutorials are an integral part of each course and you are expected and required to attend. Design Engineering is about solving problems, addressing stakeholder needs and making opportunities. Each examined module will be supported by a number of sheets of tutorial problems for you to work on in your own time. Solving these problems reinforces the work of the lectures and keeping up to date with them should be one of your top priorities.

Because getting stuck is a natural part of the learning process, timetabled tutorials are provided at which academic staff or Graduate Teaching Assistants (GTAs) can ‘debug’ your solution and get you back on the road. Discussing your solution method with a tutor is both an effective learning activity and a good model for teamwork in real design and engineering projects.

**IMPORTANT**

*Make legible records of your own solutions and keep them organised. They will help you revise before exams and will be essential to show a tutor where you had got to, and how, when you got stuck.*

5.3 Lab Exercises

You’ve chosen to study design engineering, and will want to see things working. The main aim of lab classes is to make design and engineering principles and models real, but they will also give you material to exercise report-writing skills and to analyse, understand and present experimental data.

The proportion of individual, hands-on work will differ between subjects. Some, lab exercises will be primarily demonstrations; for others, e.g. electronics and mechanics, you or your group will be doing all the practical work yourself.

5.4 Late or Absent Teaching Staff

Illness, misunderstandings, timetable confusion or a simple error can sometimes result in teaching staff not arriving when and where expected. In most cases, quick action by students can save everybody’s time. If no lecturer or tutor arrives for a timetabled class, check your timetable to find out who should have been there, and use the teaching staff lists to contact them directly and/or by email and phone. In many cases the teacher has been caught out by an out-of-sync timetable, a communications problem or a memory lapse and will then arrive quickly.
If this action fails to deliver, contact the UG Office and Senior Tutor. Any staff member who has been given leave of absence will have provided the office with details of substitute staff who can cover each teaching duty. It may be this substitute who is missing.

If neither the timetabled staff member nor the substitute can be found, the activity will normally have to be re-scheduled. Avoiding this outcome is to the benefit of everyone concerned.

5.5 Professional Skills

In addition to its own core technical knowledge and skills, every profession shares a common set of ‘transferable’ skills ranging from communication and teamwork to professional ethics. These are taught in a thread which runs throughout the core programme and has links to many teaching and learning activities.

Technical Writing Skills
You will learn some of these skills in the DE1-CID Communication In Design module, which will run in the autumn and spring terms during the first year, and your skills will be re-enforced and extended in the various project and coursework based modules throughout the degree.

Oral Presentation Skills
You will learn some of these skills in the DE1-CID Communication In Design module, which will run in the autumn and spring terms during the first year, and your skills will be re-enforced and extended in the various project and coursework based modules throughout the degree.

Teamwork Skills
You will begin to exercise teamwork skills with a ‘warm-up’ exercise before the DE1 programme even begins and will further exercise them during DE1, DE2 and DE3. The underlying theory of group dynamics and organisations is treated in Engineering Design Management and Rationale and Enterprise Management as well as the group design and design engineering projects in DE1, DE2 and DE3. The DE3 Group Project module itself includes a teamwork exercise illustrating how the theory is put into practice.

5.6 Engineering Ethics

Professional ethics are as vital within design engineering and introduced in Context in Design Engineering and subsequently extended and re-enforced through practical projects as well as the management modules, presenting individual and corporate social responsibility issues.

Each module leader will have obtained approval for project work you will undertake during their module if it will involve human or animal participants.

You, the Student, are required to submit a DE Research Ethics Student Form to your module leader to review before conducting work that involves human or animal participants. You should include any participant information sheets and consent forms that may be used. If you are working in a group, only one form needs to be submitted per group.

DE Research Ethics Student Form (LINK)

5.7 Evening Classes

The Centre for Co-curricular Studies offers evening classes in a broad selection of subjects outside science and technology, such as languages and humanities. Fees are normally due, but these will be considerably less than the equivalent classes from a private company.

Information on evening classes (LINK)
The qualifications you are studying for are widely envied and respected by employers. We work hard to maintain the fairness, accuracy and rigour of the assessment system which underpins them and you must work hard to earn them — but there is no set ‘pass rate’ and every student is capable of getting a good degree.

6. Assessment
6.1 Plagiarism

Plagiarism is the presentation of another person’s thoughts, words or images and diagrams as though they were your own. It is extremely important to understand exactly what this means before you submit any work for assessment, because the penalties for plagiarism are very severe.

When you graduate from this School with an MEng degree you will be a few steps away from Chartered status in a profession. We are trusted to ensure that you have not only the knowledge and skills but also the ethical standards which you need to deserve that status. For this reason, and because the Internet offers such free access to information, the College treats plagiarism and cheating offences very seriously indeed. In the sixth week of term you will hear a lecture on plagiarism by a representative of the College Library. Attendance at this lecture is compulsory.

The School uses the plagiarism detection site TurnItIn both to filter electronic submissions of coursework via Blackboard and to check electronic duplicates of printed submissions. If any significant level of plagiarism is detected in any submission, the best possible outcome will be a mark of zero.

Supplementary Qualifying Tests (SQTs)

In the case of a marginal fail in one, or exceptionally two, modules, the Board of Examiners may set a Supplementary Qualifying Test (SQT) to allow the candidate to reach the pass mark and progress to the next part without delay. This course of action is not guaranteed and is only available where the performance in on other modules is very good.

SQTs can take the form of an examination or coursework. The decision on the format is made by the module leader and designed to ensure that the module learning outcomes are achieved.

Students can take a maximum of 2 SQTs per year for the first three years of the course. No SQTs are allowed in the final year.

SQTs are usually done in the summer (generally early September).

Any modules that have been passed due to an SQT will be capped to 40%.

IMPORTANT

SQTs must be taken at Imperial College London. The College cannot make arrangements for them to be taken abroad.

More SQT information: Appendix D – Schemes for the Award of Honours on p70

6.2 Progression

The Design Engineering MEng programme consists of four successive, one-year parts. You must pass the assessments for each year in order to progress to the next. The large majority of students pass first time. A module is failed when the weighted sum of the assessment components is less than 40% (so, a student could get less than 40% for coursework, but then compensate that with a good exam, and vice versa).
Generally candidates who do not satisfy the examiners, either in the examinations or after Supplementary Qualifying Tests, will be required to withdraw from the College permanently.

In exceptional circumstances, a student might be allowed to retake the year.

**Retaking a Year**
Retaking a year that you have failed is only permitted in exceptional circumstances. The decision on whether or not you will be allowed to retake will be made at the Board of Examiners (in July) or after a failed SQT.

If permission is granted for you to retake a year then you will be expected to start the year again from the start (October) and complete it in full. All of your grades from your previous attempts at that year will be discarded, including any modules that you may have passed. Your grades for any years you successfully passed previously will be unaffected.

### 6.3 Mitigating Circumstances

Circumstances beyond your control may prevent you from submitting coursework on time, or may seriously affect your performance in an exam or assessed presentation. If you want us to take these circumstances into account, you must let us know the details as soon as possible. Download and complete the form in full and return it to the UG Office. Please give as many details as possible and provide evidence where possible: College policy requires that any details you provide remain confidential as far as possible.

The Mitigating Circumstances Panel will meet for a full Board three time a year:

- First week of T2 (for T1-related cases)
- First week of T3 (for T2-related cases)
- End of T3, before the Exam board meets (for T3-related cases)

### Late Coursework Submissions

**Late coursework normally receives 0%**.

If your coursework is late due a specific reason that is unforeseeable and beyond your control you should:
- Submit your coursework as soon as possible
- Submit a Mitigating Circumstance Form (MCF) as soon as possible once the coursework has been submitted.
- The MCF should contain as much detail as possible and be given to a member of the Teaching Admin Staff and should contain proof of the relevant circumstances.

**The burden of proof is on you.**

Your case will then be considered at the next full Mitigating Circumstances Board (see start of 6.3 for dates).

You will receive notification for the Teaching Admin Staff within 5 working days of the Mitigating Circumstances Board meeting. Whatever the outcome of the Mitigating Circumstances Board, your coursework will be marked and you will receive constructive feedback.

### IMPORTANT

If your coursework is not submitted within two weeks of the deadline, that coursework will be classed as ‘missed’.

Only in extreme extenuating circumstances will the School consider giving students a mark (or allow for an alternative assessment) for missed coursework.

If this happens to you, you should contact your Personal Tutor as soon as possible and explain the situation that has led to the missed coursework. You will then need to fill in a MCF as above to see if an estimated mark or alternative assessment is appropriate and possible.
If you are unable to attend an assessed presentation or exam - known in advance

Students are expected to be available for teaching and assessment between 1000-1800, Monday to Fridays for the entire duration of term including Induction week and DRAW week and the end of term. The only exceptions are English Bank Holidays as set by UK Government.

Typical excusable absences for assessments such as presentations and/or exams are:

- An urgent and unavoidable medical appointment
- The funeral of a close family member
- If you know that you will be unable to attend an assessment (usually an exam or presentation) on a fixed date then you should:
  - Complete a Mitigating Circumstance Form (MCF) as soon as possible and submit it to a member of the Teaching Admin Staff.
  - This form should contain as much detail as possible and include proof of the relevant circumstances.

The burden of proof is on you.

You will be notified of the Mitigating Circumstances Decision within ten working days of the MCF being submitted.

If you miss an assessment or exam - unforeseen

Only in extreme extenuating circumstances will The School consider giving students a mark or alternative assessment for missed exams or presentations without prior notice. IF AT ALL POSSIBLE, you should attend the assessment. If you feel you performance has been affected by circumstances, you can still submit a MCF to take the circumstances into account in the marking of your work.

If you miss an assessment or presentation you should:

- Contact the Teaching Office Staff as soon as possible (maximum, within two working days of the assessment) explaining the reasons for your absence.
- Submit a Mitigating Circumstances Form (MCF) within five working days of the assessment.
- This form should contain as much detail as possible and include proof of the relevant circumstances.

The burden of proof is on you.

Your case will then be considered at the next full Mitigating Circumstances Board (see start of 6.3 for dates).

Circumstances affecting your performance on any assessment

If you feel any of your assessments (coursework, exam or presentation) have been significantly adversely affected by major circumstances beyond your control then you can submit a MCF requesting that these circumstances are taken into consideration when the assessment is being marked.

You must:

- Contact the Teaching Office Staff within one working day of the assessment/deadline explaining the reasons that they believe that their performance was affected.
- Submit a MCF with proof within five working days of the assessment/deadline.
- This form should contain as much detail as possible and include proof of the relevant circumstances.

The burden of proof is on you.

Your case will then be considered at the next full Mitigating Circumstances Board (see start of 6.3 for dates).
You will receive notification from the Teaching Admin Staff within 5 working days of the Mitigating Circumstances Board meeting.

**IMPORTANT**
The College Health Centre can certify illness only for absence from College lasting more than one week, or absence from an Examination. Submit the form as soon as you can.

Please read the full Plagiarism section in 6.1 Plagiarism on p39

**IMPORTANT**
Do not under any circumstances use any copied or pirated coursework, or allow your work to be copied by others.

The College treats cheating on coursework exercises exactly the same way as cheating in examinations. If any student is suspected of cheating, of attempting to cheat, or of assisting someone else to cheat, the facts will be reported to the College. If found to have done so, s/he may in consequence be disqualified from all future examinations of the Imperial College.

**College disciplinary procedures (LINK)**

**Late Submission of Coursework**

**IMPORTANT**
Late coursework receives 0%. Being awarded zero marks for a major coursework item due to late submission could lead, in the worst case, to a lower degree classification or even total failure.

Each piece of coursework will have a specified submission date, set in advance and published in the module description. This submission date is a hard deadline: work submitted after that date may be marked to provide feedback, but you will not be given any credit for it.

Module leaders do not have any discretion with the coursework deadlines. Coursework submitted one minute late is classified as late. You should allow for potential delays such as computer/internet/printer glitches or delays to your journey when planning your coursework submissions.

### 6.4 Coursework

The purpose of coursework is to develop your design engineering skills, reinforce lecture material and to develop specific skills in laboratory work, computing, design etc. Most coursework is assessed, and contributes towards your degree. Coursework includes project work, prototypes, presentations, lab reports, project reports, computing exercises and progress tests which are completed and handed in during the year.

**Plagiarism**

For many assignments you will need to submit an item of individually authored work, which will be assessed and will count towards your degree. You will be required to declare sole authorship of every such item, and plagiarism is taken extremely seriously.
If there are circumstances beyond your control that have delayed the submission of your coursework, you need to refer to the mitigating circumstances section of this document.

**IMPORTANT**
Some coursework will be submitted electronically via Blackboard. Once you have submitted your work on Blackboard, Blackboard will provide you with a preview of the file you have submitted. It is your responsibility to ensure that you have submitted the correct file. If you submit the wrong file in error and subsequently miss the coursework deadline, your work will be marked as late and you will receive 0% for the work.

**Feedback to Students**

The principal objectives of setting coursework are to assess your progress and to help you improve it. Unless your work could hardly be better (or is too poor to deserve the effort), you can expect explicit and timely guidance from the marker on areas to work on — and you should aim to act on it.

The form of feedback will vary widely, depending on the nature of the submission. A common form is an itemised list of criteria with a tick-box grade for each, along with some written indication of the reason for credit being lost.

Every effort is made to return marked assessments as quickly as possible, and certainly before the feedback is needed to guide a subsequent submission.

**6.5 Examinations**

Most written examinations take place at the start of the term following a module or at the end of the summer term. There is no set ‘failure rate’ and therefore no reason why every candidate should not pass at the first attempt.

**How Papers Are Written**

Exam papers are written and checked, both internally and externally, by a process which begins several months before you sit them. Each paper is first independently solved (usually by the Associate Lecturer), then reviewed ‘cold’ by a small internal committee of academics.

It is then sent out for review the External Examiners. This person is a highly-regarded academic from outside Imperial, appointed by the University for a period of four years, who monitors the assessment process — culminating in a visit for the final Board of Examiners.

**Revision for Exams**

Normally, each examined module provides at least the last two exam papers, with answers or outline solutions, on Blackboard. These provide a useful guide for paper and question style, but cannot be relied on to guide your revision. Defining what you must be able to do in an exam is the job of the intended learning outcomes given in the module description.

Although students are generally well practiced in exams and most already have their own strategies, the Imperial Success Guide site provides several useful tips on revision. Two are especially important: Past papers should be used to study question style and to practice under ‘exam conditions’. However, relying heavily on past papers is a bad idea: your goal must be deep learning to underpin future learning and to avoid being thrown by a question posed from a fresh angle.

Don’t just try to learn the material provided by heart: engage with it and re-shape it in a way which makes sense to you as an individual.

Exam stress is an intrinsic part of assessment, and learning to cope with it is an intrinsic part of the learning experience. Even if you never sit another exam after leaving Imperial, professional life will bring you many examination–like experiences. Excellent advice on coping with exam stress — and further advice on revision strategies — is provided on the College Health Centre website.

**Health centre website on exam stress** (LINK)
Sitting the Exam

The Exam timetable will be made available to you via Blackboard. It will include all of the information that you require including time date and locations of exams.

**IMPORTANT**

You must carry your college identity card, so that your CID number can be noted and your identity checked.

The only items you can take into exams are:

- **Pens, pencils, erasers and rulers.** These must either be loose or in a transparent pouch.
- **Your college identity card.** This must be placed on your desk so that your CID is visible to be noted and your identity checked.
- **Still water** in a clear plastic bottle with no label.
- **You will be provided, if necessary, with:**
  - **A basic scientific calculator** — you will not be allowed to take your own, or any peripheral equipment. The Casio FX–83ES provided has all the usual scientific functions. If you need to familiarise yourself with this model, the UG Office will issue one on overnight loan (don’t leave this until the last-minute rush).

Other than water in a clear plastic bottle with no label, there is to be no eating or drinking during the exam.

College examination conditions and rules — e.g. the absolute rule against speaking to neighbours — are stated in the Instructions to candidates for examinations and are similar to those for any other public exams.

**IMPORTANT**

No smart watches or (other watches with functions beyond telling the time) will be allowed in the examination room. There will be at least one clock in each examination room.

**Instructions to Candidates for Examinations (LINK)**

**Handy Exam Guidance (LINK)**

**IMPORTANT**

The instructions on the front page of the answer book — fill in a list of questions attempted, start each question on a new page etc. — are there for your protection. Read and obey them!

**Consideration of Additional Examinations Arrangements in Respect of Disability**

Additional assessment and examination arrangements are provided by the College for individual candidates registered as students of the College who have physical, mental or sensory impairments (whether temporary or permanent) or specific learning difficulties. For further details, please read below.

You should contact the School’s Disability Liaison Officer (Andy Brand - a.brand@imperial.ac.uk) if you believe that you are eligible for such arrangements.

**Procedures for consideration of exam arrangements in respect of Disability**

**Choice of Questions**

Because core modules lay the foundations for a design engineering education, they do not normally offer a choice of questions. Some of the elective modules taken in later years may offer a choice of questions. If you answer more questions than you were asked to, only those most highly marked within the rules will count towards the total.
Examination Feedback

As soon as you submit an exam script for marking, it becomes the property of the College and you renounce any right to access it: in fact, allowing you such access would contravene the Data Protection Act. Arrangements can be made (on payment of a fee) to access any markers’ comments, but more efficient ways have been devised to provide appropriate feedback.

Most students are well practised at written examinations, and get the results they expect. Sometimes this is not the case and — even more rarely — the surprise is an unwelcome one.

IMPORTANT
There is no automatic right of appeal against the marks awarded at examination. Students may only appeal against exam results on the grounds of administrative or clerical error and papers will not be remarked.

The fear most commonly expressed by students is that a question, a page or an entire answer book has been overlooked. Because the nature of written scripts makes this possibility a real one, it has been virtually eliminated by straightforward, systematic checking procedures.

Another common concern, where a student accepts that s/he has arrived at the wrong answer, is the attribution of ‘method marks’. Awarding marks for intermediate results is expected: a marking scheme which does so makes marking a much easier task.

Each paper is marked by two independent internal examiners, and checked by one external examiner. Students have the right (on payment of a fee) under the Data Protection Act to sight of any such written comments or annotations. Request must be made to the College Secretariat, with payment of a fee, and annotations will then be transcribed to a separate document for access under carefully supervised conditions.

Since this method offers no real benefit, each Department and School has pursued an alternative feedback method which suits its subject. Our Examination Feedback document has been required for each examined course for many years and is now published. It provides a statistical breakdown of the response rate, average marks and standard deviations for each question and comments, for future examiners, on question effectiveness and student performance.

Grades and Numerical Marks for Exams and Coursework

Every department and School at Imperial assesses undergraduate examinations and coursework submissions on the same scale of correspondence between percentage mark, letter grade A to E and degree honours class.

All grades and numerical marks issued during the academic year are provisional: they are issued to provide feedback and to provide an indication of progress. Final marks are awarded only after work has been moderated. Ultimately these marks, appropriately weighted, will be used (perhaps after further discussion and moderation at a meeting of the internal and external examiners) to determine which degree class is awarded — so there is therefore also a correspondence between mark and degree class.

These correspondences are shown the Table below.

<table>
<thead>
<tr>
<th>Grade Letter</th>
<th>... corresponds to mark (%)</th>
<th>... corresponds to degree class</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
<td>85+</td>
<td>First class honours</td>
</tr>
<tr>
<td>A</td>
<td>70–84</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>60–69</td>
<td>Upper second class honours</td>
</tr>
<tr>
<td>C</td>
<td>50–59</td>
<td>Lower second class honours</td>
</tr>
<tr>
<td>D</td>
<td>40–49</td>
<td>Third class honours</td>
</tr>
<tr>
<td>E</td>
<td>below 40</td>
<td>Not up to honours level</td>
</tr>
</tbody>
</table>
Moderation

Major items of coursework are independently double marked, and a special procedure is used to reconcile differences between the first and second markers. Because the projects which are subject to second marking are so diverse, independent assessors sometimes award significantly different marks. This is especially true of the individual project final report, which also serves to assess how well the student has explained his/her work to someone who can be expected to be knowledgeable about the general field but not about the particular topic.

The moderation process is intended to ensure fair and accurate marking and to resolve discrepancies in project report marks between the supervisor and the independent marker.

If the discrepancy in marks is less than 10 percentage points, the two marks are averaged and moderation is unnecessary. Where the discrepancy is equal to, or greater than 10 percentage points, the supervisor and the independent marker are invited to:

- Discuss the discrepancy; and
- Agree a single mark and notify the course leader of it by email. For the record, specific justifications must be recorded for the change.

If no single mark can be agreed by a prescribed date, the student’s report and copies of all mark sheets are sent to a Moderator, who will recommend a mark to the Moderation Panel.

A Moderation Panel is formed, considers, and decides a final mark for:

These disputed cases;
- Reports by students identified as being potentially on degree class borderlines; and
- Reports originally given unusually high or low marks.

The panel also arbitrates on marks requested to compensate for ‘Special Difficulties’. Individual cases are carefully chosen to be considered by ‘disinterested parties’ excluding — for example — the student’s personal tutor.

After the panel meeting the course leader forwards the recommended project marks, and minutes of the panel meeting, to the Examination Officer.

Getting Your Results

After the Final Board of Examiners Meeting, results for the session are made available — first as grades and later, via Registry, as authorised percentages.

Exam results will be released in early July. If you are required to take a resit or Supplementary Qualifying Test (STQ) you will be notified via email shortly before exam results are released. Resits and SQTs will take place in early September. The timetable for re-sits and SQTs will be made available during July. Overall result grades will be posted on Blackboard and, by CID number, on the noticeboard outside the UG office.

Those who have passed the year will not receive a letter of confirmation, but detailed course marks will be released via Student e-Service by the end of July.

If you are a sponsored student and need your exam results sent to your sponsor, please contact the Student Hub (Level 3, Sherfield Building) and they can arrange this for you.

The Dean’s List

Because Imperial graduates compete in an international market, Imperial has matched the USA practice of recognising the top 10% of A-graded students on a ‘Dean’s list’ — and marking this achievement on the transcript of graduating students.
The conditions are:
- Achieving an overall mark of 70% or greater during the previous 12 months, and
- Being placed within the top 10% (rounded up) of students in their cohort — e.g., of their year and programme.

Student Prizes and Awards

All internal and external awards available to Design Engineering students will be advertised on Blackboard.

DESIRE (Design Engineering Selected Innovation REward)

For modules where there is a design engineering output in the form of significant coursework, a module leader or delegated representative selects one item of output for the DESIRE selected works award to an individual or group. This is a prestigious award within the School, and something that all students will we hope aspire to win on a few occasions in their degree. DESIRE selected works need not necessarily be associated with the top mark or grade scoring project. The award is at the discretion of the module leader.

We expect DESIRE selected works to become a badge of honour for Design Engineers!

In the Academic Year 2015-16, the DESIRE selected works award has been assigned for the People’s Pod assignment (design the interior of dual-occupant public transport autonomous vehicle), within the Design 1 module led by Prof. Neil Mansfield.

A group of external assessors from University of Leeds, Nissan, and the Transport Systems Catapult presented the award to the AvoPodo group, composed by Clarisse Bret, Francois-Baptiste Costa-Peretti, Josephine Latreille, Kristof van der Fluit and Zixia Zhang. They were particularly impressed with the combination of vision and originality with a concept that is feasible.
The MEng in Design Engineering covers fundamental engineering across several fields, design techniques, business and communications skills. Each student can do much to further enhance their degree by beginning professional development at an early stage — especially via industrial experience.

7. Professional Development
7.1 What is a Chartered Engineer?

The title Chartered Engineer (CEng) is protected by UK civil law and is internationally one of the most widely recognised of engineering qualifications. In the UK, it is awarded by the Engineering Council.

The benchmark for CEng is UK-SPEC: the UK Standard for Professional Engineering Competence. UK-SPEC, published by the Engineering Council, tries to specify the essential attributes of a professional engineer. It was developed, and is regularly updated, by panels representing UK professional engineering institutions, employers and educators.

To become a Chartered Engineer, you will need:
- The Educational Base: an MEng or equivalent degree from a recognised degree programme like ours; and
- An extended period of Initial Professional Development (IPD): work-based training and/or experience under the guidance of a Mentor.

A professional institution like the Institution of Mechanical Engineers (IMechE), the Institution of Engineering Designers (IED) or the Institution of Engineering and Technology (IET), acts as an agent for the Engineering Council: it both accredits degree programmes and, through a network of suitably qualified mentors, monitors the subsequent IPD process.

7.2 Industry Placement

Students going onto the third and fourth year of the DE MEng take part in a six-month industrial placement intended to give real commercial experience and an opportunity to put the skills acquired into practice.

The placements will run April–September in the third year. Third year exams will be taken early to ensure that all students will be present in College. The School’s Placements Officer, Leila Sheldrick (EMAIL) and The UG office will arrange and select a number of appropriate placement companies and industrial supervisors. These will be prepared to provide suitably challenging and well-defined project objectives to students. Companies will be generally expected to pay the students at a level appropriate for a new graduate.

Arranging your placement

During Year 2, sessions will be run with the placement officer to inform you of the placements procedure. Attendance at these sessions is mandatory. The school will provide a list of companies and pre-agreed placements through an online portal. Students will need to find adverts of interest to them, and then go through the company’s individual application and interview process to secure their placement. Students will also be able to source a position with a company not offered by the College, however, this will need to be approved with the School’s Placements Officer to ensure it is appropriate for the learning outcomes.

Supervision and Assessment

Students will have one placement tutor (School academic) and one industrial supervisor (a member of staff at the host company). The module will be assessed against objectives by their placement tutor on the basis of an interim and final report, a presentation, an exhibition, and an employer’s report from the industrial supervisor.
Chapter 7. Professional Development

**Preparation**
In preparation for your placement it is important that you develop your skills-base in areas relevant to employment and your CV and portfolio. We strongly encourage students to ensure that they manage their projects effectively in DE1, DE2 and DE3 as well as extra-curricular activities and capture the outputs and work for inclusion in your portfolio and CV.

**IMPORTANT**
Unless your industry placement is based in London, you will only need accommodation during T1 and T2 of Year 3.

### 7.3 UROP Placement

The Undergraduate Research Opportunities Programme (UROP) matches students with ‘research internships’, either within or outside Imperial. A UROP placement offers work experience within a research environment; the work is usually paid; some bursaries are available; and ECTS credits can be earned via the XPD scheme.

The UROP scheme at Imperial is coordinated within Registry, and is described in detail on the College web page. However, perhaps the best way to initiate a placement within Imperial will be to contact a research-active staff member whose work interests you. If you do agree a placement by this informal route it should still be set up formally, otherwise you will be unable to earn ECTS credits.

**IMPORTANT**
The best way to initiate a placement within Imperial is to contact a research-active staff member whose work interests you.

Most UROP placements are paid, but not all supervisors have sufficient research funding available. Some research sponsors, even relatively generous ones, put tight restrictions on the way in which funds can be spent. Under these conditions supervisors may be able to offer exciting projects bringing close interaction with potential employers, but unable to support bursaries for them.

[Imperial UROP webpage (LINK)]

### 7.4 Careers Service Sessions

The College’s Careers Service are providing sessions for all DE Students during the 2016–17 academic year.

These weekly sessions will be on Tuesdays 12:00–13:00 in the Hats Room (10 Princes Gardens).

Each session will be with a specialist from the Careers Service.

These advisors will be able to provide careers consultations or internship consultations. They can also help you by providing general careers or specific internship / placement advice, or advice on preparing a CV.

These are not drop-in sessions - **you need to book a specific time slot** to see the careers advisors.

**How to book**
- First you must register with Jobs Live at [www.imperial.ac.uk/careers/jobslive](http://www.imperial.ac.uk/careers/jobslive)
- Then you must book your specific timeslot on the morning of your appointment.
- The booking is open from 0700 on the day of the appointment.

**School’s Careers Officer**

The School’s Careers officer is Prof. Neil Mansfield.
If you have any queries or suggestions about careers events, you can email him at [neil.mansfield@imperial.ac.uk](mailto:neil.mansfield@imperial.ac.uk)
7.5 Intellectual Property

What is IP?

Intellectual Property (IP) is a term used to describe an individual’s creative output such as an invention. Intellectual Property Rights (IPRs) such as trademarks, patents, copyright and design rights are the legal means that can be used to prevent others from using your creative output without your consent.

You need to consider protecting any IP you develop whilst you are at The School, whether you have developed it as part of the School’s syllabus or through extra-curricular activities.

IP will be covered during the MEng curriculum however you should start learning the basics now. The College has some excellent resources to teach you about IP on the Imperial College website.

The College have also created two excellent, and to the point, YouTube videos which are also recommended viewing.

[Collected Intellectual Property resources]
[Intellectual Property for students: Top Tips]
[IP for students: Where to go]
Your feedback is important to this School, the College and Imperial College Union. Three College-wide surveys provide regular opportunities to provide it.

8. Student Surveys
8.1 UG SOLE Lecturer/Module Survey

This is a college-level survey. This survey, which runs at the end of the autumn and spring terms, is your chance to tell us your opinion of the modules you have attended and the lecturers who taught them. Alongside exam and coursework results, SOLE (and especially the free text comment boxes) provide our main source of information for managing course development.

**IMPORTANT**
When entering free text, please be absolutely specific (with names!) about who or what you are commenting on.

The dates for SOLE 2016-17 are:

- Autumn Thursday 1 December - Tuesday 3 January
- Spring Thursday 14 March – Tuesday 24 April
- Summer Tuesday 8 June – Tuesday 2nd July

Access survey and past results (LINK)

8.2 Student Experience Survey (SES)

This is a college-level survey. Run at the same time as the autumn term UG SOLE lecturer/module survey is the Union’s Student Experience Survey (SES). This survey will cover your induction, welfare, pastoral and support services experience.

- Motivations for taking the programme,
- Depth of learning
- Organisation
- Dissertation and
- Professional development.

During spring term you will receive an email providing a link to the survey.

**IMPORTANT**
Imperial surveys are absolutely anonymous. The more students that take part the more representative and useful the results, so please take a few minutes to give your views.

8.3 National Student Survey – NSS

This is a national-level survey. While in the final year of your programme, you will be invited to take part in the National Students Survey (NSS). NSS asks all final-year undergraduates to rate a range of elements related to their student experience such as:

- Academic support
- Learning resources and
- Assessment and feedback.

This nationwide survey compiles year-on-year comparative data for higher education institutions, with its results being made publicly available.

Unistats website (to see Imperial’s National Student Survey results) (LINK)

Read examples of student survey response at Union website (LINK)
As you progress through the 4 years of the DE programme, there are managed transitions from the learning of fundamental skills to the exercise of judgement in individual project work, and from a prescribed syllabus to a choice of specialisations.

9. DE Year by Year
A schematic overview of the academic curriculum is given in Appendix B – Programme Modules Gantt Chart on p66.

Every teaching and learning activity is part of a module, which is taught in a specific year of the course (DE1 to DE4). These are grouped in board themes, listed below.

- Design
- Design engineering project
- Engineering
- Transferrable skills
- Enterprise

Each module is self-contained and separately assessed although, of course, its subject matter will be linked to that of other modules.

**Note**
As the MEng Design Engineering is a new course, information regarding subsequent years is subject to change.

In addition the programme includes a diverse range of electives, some run by other departments, some run by the Dyson School of Design Engineering and open to students from other departments. These modules offer a crucial opportunity for interdisciplinary experience and activities.

A key activity in the programme is the extensive project work, some in combination with students from other departments, which is undertaken in each of the years, enabling implementation of material covered in the modules as well as project based learning of key technologies.

The programme has a diversity of means of assessment with a particular emphasis on project work, assignments and coursework as opposed to examinations. The project work focus enables students with particular requirements to schedule their efforts according to their particular needs. Several electives are available in years three and four, permitting students to adjust the focus of their studies as they progress, and the intention is to make further elective modules available as the School develops.
9.1 The First Year

The programme commences with key foundational skills and knowledge building in design and engineering fundamentals. Beginning with induction projects, the novice design engineer’s experience of the design process is steadily developed through a series of design engineering projects, enabling the student to see the practical application of content introduced in other modules as well as developing their own individual experience base and design process, communication and project management skills.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Title</th>
<th>Description</th>
<th>Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transferable Skills</td>
<td>Induction Projects</td>
<td>Introduce cohort to School and resources, introduce student group to each other and staff, embed in London and Imperial</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Engineering</td>
<td>Engineering Mathematics</td>
<td>Engineering mathematics for design engineering</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Transferrable skills</td>
<td>Communication in Design</td>
<td>Presentation and technical communication skills, in combination with development of visual communication skills</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Design</td>
<td>Context in Design Engineering</td>
<td>Introduce the context for design engineering through high level presentations, debates and deep dives.</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Engineering</td>
<td>Production and Materials</td>
<td>Introduction to production and manufacturing resources</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Design</td>
<td>Design 1</td>
<td>Exploring the integration of design engineering tools to deliver effective design, introduction to design engineering research</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Engineering</td>
<td>Engineering Analysis 1.1 - Mechanics</td>
<td>Development of fundamental skills in Mechanics and Dynamics for Design</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Engineering</td>
<td>Engineering Analysis 1.2 - Energy and Design</td>
<td>This module covers an introduction to the principles of thermodynamics, energy, fluids mechanics and heat transfer from a design perspective.</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Engineering</td>
<td>Computing 1</td>
<td>This module is designed to be a first introduction to computer programming.</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Engineering</td>
<td>Engineering Analysis 1.3 - Electronics</td>
<td>Development of fundamental skills in Electronics</td>
<td>Compulsory</td>
</tr>
</tbody>
</table>
9.2 The Second and Third Years

In the second and third years, the range of engineering fundamentals, design thinking, creative problem solving, management and communication skills are developed, leading to a series of enterprise modules and projects where students develop skills in value propositions and turning their concepts into embodied concepts and proposals that are suited to corporate and enterprise roll-out. Students going onto the fourth year will then take part in a six-month industrial placement intended to give them real commercial experience and an opportunity to put the skills they have acquired to practice.

The Second Year

<table>
<thead>
<tr>
<th>Theme</th>
<th>Title</th>
<th>Description</th>
<th>Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Engineering Project</td>
<td>Gizmo (mechatronics and robotics)</td>
<td>Development of key skills in machine elements and physical computing</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Engineering</td>
<td>Engineering Analysis 2.1 - Advanced Mechanics</td>
<td>Development of in-depth skills in Advanced Mechanical Analysis</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Engineering</td>
<td>Engineering Analysis 2.2 - FEA</td>
<td>Development of in-depth skills in Finite Element Analysis</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Engineering</td>
<td>Engineering Analysis 2.3 - Electronics for Product and System Design</td>
<td>Development of in-depth skills in Electronics for Product and System Design</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Design</td>
<td>Design 2</td>
<td>Exploring the use of design engineering principles to deliver technical function, aesthetic function, social function, economic functional and psychological function</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Design Engineering Project</td>
<td>Computing 2</td>
<td>Software Implementation and Engineering</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Transferrable skills</td>
<td>Big Data</td>
<td>Introduction to statistical analysis, sensitivity coefficients and practical data analysis and “big-data” tools.</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Design engineering project</td>
<td>Engineering Design Project</td>
<td>Design project exploring the application of skills acquired to deliver combined technical, aesthetic, economic and social function</td>
<td>Compulsory</td>
</tr>
</tbody>
</table>
# The Third Year

<table>
<thead>
<tr>
<th>Theme</th>
<th>Title</th>
<th>Description</th>
<th>Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong></td>
<td>Design Art Creativity</td>
<td>Domain shifting and exploration of the fine arts and their potential for influencing design engineering</td>
<td>Elective</td>
</tr>
<tr>
<td><strong>Enterprise</strong></td>
<td>Engineering Design Management and Rationale</td>
<td>Management principles, project management, business measures, Problem structuring, problem structuring tools, decision rationale</td>
<td>Compulsory</td>
</tr>
<tr>
<td><strong>Enterprise</strong></td>
<td>Design Led Innovation and Enterprise</td>
<td>Exploring a meta-theme and user personas to develop a value proposition for a new enterprise</td>
<td>Elective</td>
</tr>
<tr>
<td><strong>Design engineering project</strong></td>
<td>Robotics 1</td>
<td>Introduction to robotics, sensors and actuators, control</td>
<td>Compulsory</td>
</tr>
<tr>
<td><strong>Design engineering project</strong></td>
<td>Optimisation 1.1 - Fundamental Optimisation</td>
<td>Introduction to optimisation and development of practical skills in optimisation</td>
<td>Compulsory</td>
</tr>
<tr>
<td><strong>Design engineering project</strong></td>
<td>Optimisation 1.2 - System Design and Applications</td>
<td>Advanced System Design and Applications</td>
<td>Elective</td>
</tr>
<tr>
<td><strong>Design engineering project</strong></td>
<td>Group Project</td>
<td>Engineering design group project/interdisciplinary group project</td>
<td>Compulsory</td>
</tr>
</tbody>
</table>
9.3 The Fourth Year

The fourth year offers several electives, allowing a greater degree of specialisation to students than earlier years. The fourth year also contains a high proportion of the programme’s commercially oriented modules; this was designed to consolidate the students’ industrial placement experiences with their previous academic studies and invest students with the skills in enterprise and design in commercial contexts that the programme aims to provide its graduates.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Title</th>
<th>Description</th>
<th>Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Engineering Project</td>
<td>Industry Placement</td>
<td>6 month Industry Placement</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Design Engineering Project</td>
<td>Robotics 2</td>
<td>Development of practical skills in control, programming and application of sensors and actuators in developing products of the future</td>
<td>Elective</td>
</tr>
<tr>
<td>Enterprise</td>
<td>Enterprise Management</td>
<td>Business management, Problem structuring, practical problem structuring tools, and decision rationale tools</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Design Engineering Project</td>
<td>Solo Project</td>
<td>Major Design Engineering Individual Project</td>
<td>Compulsory</td>
</tr>
<tr>
<td>Design Engineering Project</td>
<td>Optimisation 2</td>
<td>Application of advanced optimisation tools and consideration of human factors in combination with technical attributes</td>
<td>Elective</td>
</tr>
<tr>
<td>Design</td>
<td>Industrial Design</td>
<td>In depth exploration of industrial design principles and practice</td>
<td>Elective</td>
</tr>
<tr>
<td>Design</td>
<td>Engineering Design Analysis</td>
<td>Advanced engineering design analysis, including further Finite Element Analysis</td>
<td>Elective</td>
</tr>
<tr>
<td>Enterprise</td>
<td>Enterprise Roll Out</td>
<td>Development of a value proposition for a practical enterprise and roll out</td>
<td>Compulsory</td>
</tr>
</tbody>
</table>
9.4 Key Dates and Attendance

The College has both a duty of care towards its students, and regulations to ensure that they follow the prescribed programme of studies. For these and other reasons there are a number of points during the year at which your absence will be reported to the Senior Tutor.

Attendance is monitored at:
- Personal tutorials
- Lab/exercise/tutorial sessions
- Workshop assignments
- All coursework submissions are registered.

Key dates for the 2016-17 year are:
- Autumn term: Saturday 1st of October to Friday 16th of December 2016
- Spring term: Saturday 7th of January to Friday 24th of March 2017
- Summer term: Saturday 29th April to Friday 30th June 2017

**IMPORTANT**
For all coursework submission deadlines, key dates and late-breaking news associated with specific modules, please check the calendar on the corresponding BlackBoard page.

You are required to attend College until the end of session because the External Examiners may wish to interview you during the last week. You should therefore avoid any commitment — other than those forming part of the course — which could prevent you attending College during term-time.

**Term Structure**

Design Engineering has teaching across all three terms. We also have exams throughout the year, rather than in one session at the end of the year.

### Terms 1 & 2

<table>
<thead>
<tr>
<th>Week</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Welcome Week (T1) Exams (T2)</td>
</tr>
<tr>
<td>2-5</td>
<td>Teaching</td>
</tr>
<tr>
<td>6</td>
<td>DRAW Week</td>
</tr>
<tr>
<td>7-10</td>
<td>Teaching</td>
</tr>
<tr>
<td>11</td>
<td>Supplementary activities</td>
</tr>
</tbody>
</table>

### Term 3

<table>
<thead>
<tr>
<th>Week</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exams</td>
</tr>
<tr>
<td>2-4</td>
<td>Teaching</td>
</tr>
<tr>
<td>5</td>
<td>DRAW Week</td>
</tr>
<tr>
<td>6-8</td>
<td>Teaching</td>
</tr>
<tr>
<td>9</td>
<td>Exams</td>
</tr>
</tbody>
</table>

**IMPORTANT**
There will be scheduled mandatory activities throughout the first and last weeks of every term. You are expected to be available to attend School from the first day of term to the last.

**What is DRAW Week?**

DRAW stands for Design, Review, Applications and Workshops.

During DRAW Weeks there will be a variety of one-off activities timetabled. Some of these will be directly related to your current studies and some of them will be looking beyond the curriculum.

DRAW Week is a busy week and all of the sessions are mandatory.

**IMPORTANT**
DRAW Weeks are not traditional ‘Reading Weeks’ – you will not have the chance for trips away from College during this time.
9.5 Interruption of Studies

The DE MEng programme, its examination and assessment structure and its marking scheme are designed for continuous attendance. Interruption of Studies — effectively, temporary withdrawal — can be arranged for on medical, financial or personal grounds, but can create significant problems especially for international students.

If you wish to take time out from your course of study, speak to your personal tutor first. S/he will refer you to the Senior Tutor, but it is important for us to understand your particular case and all aspects of why you wish to take the ‘gap’. If your plans are to work, for example, there may be options for integrating them with your current degree programme or for transferring to another. Temporarily ceasing to be a student can create significant problems: details of these are given on the Registry website.

Registry Information on Interruption of studies (LINK)

9.6 Graduation

With your final-year taught modules examined and your project work written up and presented, the degree programme is over. Academic and administrative staff now integrate all of the module marks and any other relevant information to decide, at a final meeting, the degree class to award.

The Board of Examiners

In reality two meetings interspersed with fact-finding activities and reviews, this procedure leads to a final mark for graduating students and to a decision on progression for all others. The process begins with the collection of all marks registered during the year for every student. Checks are made at this stage to ensure that each student has a mark for each module for which s/he was registered.

Verified marks are next input to a master database which contains the marks brought forward from previous years for each registered student. Finally a program which implements the progression rules for each student’s year of entry is run to update the database and arrive at a mark for the current year.

A Pre-Exam Board Meeting, attended by a core group of academics and administrators including the Examinations Officer and DUGS, takes an overview of the year’s results. Special cases are discussed and exam or coursework marks for modules which may require moderation are identified. The group considers preliminary outcomes for individual students. In particular, College regulations require every candidate who is within 2.5% of a degree class boundary (e.g. who has a mark between 67.5% and 70%) to be considered for promotion. This is increased to 5% where mitigating circumstances are taken into account. The External Examiners — senior academics from another UK university — now arrive. They spend a day reviewing all marked examination scripts and coursework marked during the year, concentrating on individual project reports and group project results for students who might be considered for degree class promotion. The Pre Exam Board Meeting and the External Examiners’ visit ensure that all relevant information is reviewed in preparation for the Final Board of Examiners Meeting.

IMPORTANT
The External Examiners may decide, for any reason, that they wish to interview a student in person.

The Final Board of Examiners Meeting is attended by all academic staff (who assess
students and are therefore ‘Examiners’), the External examiners and a representative from Registry to advise on procedures and regulations. This is the occasion on which the recommendation for degrees and degree classes (honours) are formally agreed. At this point a decision is made on whether a student passes/fails a year or will be required to take a Supplementary Qualifying Test (SQT).

A decision is also made on:
• Whether to carry the information forward to the following year
• Whether a graduating student is awarded an appropriate compensation in marks.

NOTE
At no stage is the proportion of results in each degree class used to implement a ‘quota’, or taken into account in any way at all. In theory every student could get a first!

---

**The Graduation Ceremony**

On what the College calls Commemoration Day in late October after your final year, you will arrive at the graduation ceremony as an undergraduate, participate as a graduand and emerge as a graduate.

Commemoration Day for 2016 is Wednesday, 19 October, 2016 — We look forward to the first graduation class for the DE MEng in October 2019!

Invitations are issued during August.

Attendance is not required — your degree will be awarded anyway! — but few graduands manage to resist the allure of the occasion and the pressure of family and peers.

[Graduation website (LINK)]
10. Appendices
Building key

1 Beit Quadrangle
   Beit Hall, Imperial College Union

2 Imperial College Union

3 Ethos Sports Centre
   Sport Imperial

4 Prince’s Gardens, North Side
   No.8: Early Years Education Centre
   No.10: Chaplaincy
   No.11: UK Energy Research Centre
   No.15: Centre for Environmental Policy

5 Weeks Hall

6 Blackett Laboratory
   Physics, Institute of Shock Physics

7 Roderic Hill Building
   Aeronautics, Biology, Centre for Process Systems Engineering,
   Chemical Engineering, Composites Centre

8 Bone Building
   Aeronautics, Chemical Engineering

9 Royal School of Mines
   Earth Science and Engineering, Materials

10 Aston Webb
    Earth Science and Engineering

11 Bessemer Building
   Centre for Blast Injury Studies, Bioengineering,
   Imperial Incubator, Institute of Biomedical Engineering,
   Institute for Systems and Synthetic Biology

12 Goldsmiths Building
   Bioengineering, Materials

13 Huxley Building
   Computing, Institute of Shock Physics, Mathematics, Physics

14 ACE Extension
   Aeronautics, Chemical Engineering

15 William Penney Laboratory
   London e-Science, Union Centre

16 Electrical Engineering Building
   Electrical and Electronic Engineering, Energy Futures Lab

17 Business School
   Centre for Quantitative Finance, Innovation Studies Centre,
   Entrepreneurship Centre, Centre for Health Management

18 53 Prince’s Gate
    Business School

19 Eastside
   Gabor Hall, Linstead Hall, Wilkinson Hall, Eastside bar and restaurant,
   Essentials convenience store

20 Sherfield Building
   Level 1: Catering, Centre for Health Policy, Queen’s Tower Rooms,
           Security Reception
   Level 2: Bank (Santander), Fuel Stop, Great Hall, Junior Common Room,
           Newsagent, Optician, QT snack bar, Senior Common Room, Union Shop
   Level 3: Academic Visitors’ Accommodation, Centre for Academic English,
           Centre for Co-Curricular Studies, Conference Office, Equality and Diversity
           Unit, Finance, Graduate Schools, HR Pensions, Human Resources,
           International Student Support, Outreach, Centre for Continuing Professional
           Development, Registry, Sport Imperial, Student Accommodation Centre, Student Hub

21 Grantham Institute – Climate Change and the Environment

22 Faculty Building
   Academic Health Science Centre (AHSC), Central Secretariat,
   Climate-KIC, Communications and Public Affairs, Corporate Partnerships,
   Faculties of Engineering, Medicine and Natural Sciences Administration,
   Finance, Human Resources, Institute for Security Science and Technology,
   Institute of Global Health Innovation, Planning, President’s Office,
   Research Services

23 58 Prince’s Gate
   Ballroom, Billiard Room, Boardroom, College Room,
   Garden Room, Imperial Consultants (ICON), Oak Room,
   Programme Management Office – Enterprise Division

24 170 Queen’s Gate
    Council Room, Dining Room and Solar,
    President’s Residence

25 Central Library
   Library Archives and Special Collections

26 Queen’s Tower

27 Skempton Building
   Civil and Environmental Engineering, Centre for Environmental Control and Waste Management,
   Centre for Transport Studies, Wohl Reach Out Lab

28 City and Guilds Building
   ICT, Mechanical Engineering, Vibration University Technology Centre

29 Southside
   Falmouth Keogh Hall, Selkirk Hall, Tizard Hall,
   Health Centre, Dentist

30 Sir Ernst Chain Building – Wolfson Laboratories
   Biology, Cell and Molecular Biology, Centre for Bioinformatics,
   Electron Microscopy Centre, Glycobiology Training, Molecular Biosciences,
   Research and Infrastructure Centre, Centre for Structural Biology

31 Flowers Building
   Cell and Molecular Biology, Centre for Integrative Systems
   Biology and Bioinformatics, Chemistry, Electron Microscopy Centre,
   MRC Centre for Molecular Bacteriology and Infection

32 Chemistry Building
   Chemistry

33 Sir Alexander Fleming Building
   Medicine, Biology, Biomedical Sciences, Cell and Molecular Biology,
   Molecular Biosciences

34 Chemistry RCS1
   Biochemistry, Biology, Centre for Photomolecular Sciences,
   Chemistry

35 52 Prince’s Gate
    Imperial Innovations

36 Alumni Visitor Centre
   College Cafe
Appendix B - Programme Modules Gantt Chart

<table>
<thead>
<tr>
<th>ELECTIVES</th>
<th>Terms</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction Projects</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Engineering Mathematics</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Communication in Design</td>
<td>1,2</td>
<td>6</td>
</tr>
<tr>
<td>Context in Design Engineering</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Production and Materials</td>
<td>1,2,3</td>
<td>12</td>
</tr>
<tr>
<td>Design 1</td>
<td>1,2,3</td>
<td>12</td>
</tr>
<tr>
<td>EA 1.1 - Mechanics</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>EA 1.2 - Energy and Design</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>EA 1.3 - Electronics</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Computing 1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>GISMO (mechatronics and robotics)</td>
<td>4, 5</td>
<td>12</td>
</tr>
<tr>
<td>EA 2.1 - Advanced Mechanics</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>EA 2.2 - FEA</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>EA 2.3 - Electronics for Product and System Design</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Design 2</td>
<td>6, 6</td>
<td>6</td>
</tr>
<tr>
<td>Computing 2</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Big Data</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Engineering Design Project</td>
<td>6, 6</td>
<td>12</td>
</tr>
<tr>
<td>Engineering Design Management and Rationale</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Robotics 1</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Optimization 1.1 - Fundamental Optimisation</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Optimization 1.2 - System Design and Applications</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Group Project</td>
<td>8, 8</td>
<td>15</td>
</tr>
<tr>
<td>Design Art Creativity</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Design Led Innovation and Enterprise</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Audio Experience Design</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Industry Placement</td>
<td>9</td>
<td>42</td>
</tr>
<tr>
<td>Enterprise Management</td>
<td>10, 10, 10</td>
<td>12</td>
</tr>
<tr>
<td>Enterprise Roll Out</td>
<td>10, 10, 10</td>
<td>12</td>
</tr>
<tr>
<td>Solo Project</td>
<td>10, 10, 10</td>
<td>10</td>
</tr>
<tr>
<td>Optimisation 2</td>
<td>11, 11, 11</td>
<td>6</td>
</tr>
<tr>
<td>Industrial Design</td>
<td>10, 10, 10</td>
<td>6</td>
</tr>
<tr>
<td>Robotics 2</td>
<td>10, 10, 10</td>
<td>6</td>
</tr>
<tr>
<td>Engineering Design Analysis</td>
<td>11, 11, 11</td>
<td>6</td>
</tr>
</tbody>
</table>

- **Terms:** 1, 2, 3, 4
- **ECTS:** Numbers represent the number of ECTS (European Credit Transfer System) units for each module.

The chart color-codes the transferable skills, with each skill represented by a different color: Design, Engineering, Design engineering project, and Enterprise.
Appendix C – DE Assessment Schedule

Assessment of DE modules varies between examination-only, coursework-only and combined assessment. The primary modes of assessment will be:

- The coursework assignments are evaluated by means of written reports and, where applicable, presentations or demonstrations.
- The examinations are generally of one and a half hours in duration.
- The forms of assessment each module will employ is given below. The following table is subject to change. Information about the assessment of every individual running module can be found on Blackboard and/or asked directly to the module leader.

<table>
<thead>
<tr>
<th>Year</th>
<th>Module</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Induction Projects</td>
<td>(100%) Oral presentation by the project members to panel of assessors made up of members of DE staff (10 min) followed by question and answer session (10 min).</td>
</tr>
<tr>
<td>1</td>
<td>Engineering Mathematics</td>
<td>(70%) Unseen written exam (1.5 hours) (30%) Mid-term (W6) and end-term (W11) tests.</td>
</tr>
<tr>
<td>1</td>
<td>Communication in Design</td>
<td>(100%) Individual project work including assignments for sketching (25%), engineering drawing (25%), digital methods (25%), and making oral presentations (25%)</td>
</tr>
<tr>
<td>1</td>
<td>Context in Design Engineering</td>
<td>(50%) Individual presentations (50%) Individual brief</td>
</tr>
<tr>
<td>1</td>
<td>Production and Materials</td>
<td>(50%) Unseen written exam (50%) Lab practicals and written reports</td>
</tr>
<tr>
<td>1</td>
<td>Design 1</td>
<td>(30%) Promo Page (20%) Group project contract book (20%) Group project final written report (30%) Oral presentation by the project members to panel of assessors made up of members of DE staff (10 minutes) followed by question and answer session (10 minutes)</td>
</tr>
<tr>
<td>1</td>
<td>Engineering Analysis 1.1 - Mechanics</td>
<td>(20%) Lab report coursework (80%) Unseen written exam (1.5 hours)</td>
</tr>
<tr>
<td>1</td>
<td>Engineering Analysis 1.2 - Energy and Design</td>
<td>(100%) Unseen written exam (1.5 hours)</td>
</tr>
<tr>
<td>1</td>
<td>Engineering Analysis 1.3 - Electronics</td>
<td>(40%) Coursework (4 Laboratory Experiments &amp; 1 project) (60%) Unseen written exam (1.5 hours)</td>
</tr>
<tr>
<td>1</td>
<td>Computing 1</td>
<td>100% Computer-based programming assessment (one at the end of the term)</td>
</tr>
<tr>
<td>2</td>
<td>Gizmo (mechatronics and robotics)</td>
<td>(20%) Group project report (40%) Group project oral presentation, demonstration (inc. build inspection) (30%) Individual project written report (10%) Individual project oral presentation</td>
</tr>
<tr>
<td>Year</td>
<td>Module</td>
<td>Assessment</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>Engineering Analysis 2.1 - Advanced Mechanics</td>
<td>(90%) Exam (1.5 hours) (10%) Coursework</td>
</tr>
<tr>
<td>2</td>
<td>Engineering Analysis 2.2 - FEA</td>
<td>(70%) Individual course work (30%) tutorial activities</td>
</tr>
<tr>
<td>2</td>
<td>Engineering Analysis 2.3 - Electronics for Product and System Design</td>
<td>(60%) Exam (1.5 hours) (40%) Laboratory Experiments and Team Design Project</td>
</tr>
<tr>
<td>2</td>
<td>Design 2</td>
<td>(30%) Tutorial submissions (70%) Coursework (70% Individual project written report; 30% Oral presentation by each student to a panel of assessor made up of members of DE staff followed by question and answer session.</td>
</tr>
<tr>
<td>2</td>
<td>Computing 2</td>
<td>(60%) Coursework (2 assignments, one individual and one group assignment); (40%) Computer-based programming assessment;</td>
</tr>
<tr>
<td>2</td>
<td>Big Data</td>
<td>(100%) Individual coursework (2 assignments; one group presentation on statistical analysis, one individual exercise on project-based problem solving)</td>
</tr>
<tr>
<td>2</td>
<td>Engineering Design Project</td>
<td>(30%) Interim presentation of concept ideas (30%) Final oral presentation to panel (40%) Final group project written report</td>
</tr>
<tr>
<td>3</td>
<td>Design Art Creativity</td>
<td>(30%) Individual essay (30%) Oral presentation by the project members to panel of assessors made up of members of DE staff (10 min) followed by question and answer session (10 min). (40%) Individual project work</td>
</tr>
<tr>
<td>3</td>
<td>Engineering Design Management and Rationale</td>
<td>(50%) Unseen written exam (3 hours) (50%) Group project written report</td>
</tr>
<tr>
<td>3</td>
<td>Design Led Innovation and Enterprise</td>
<td>(70%) Group project final written report (30%) Oral presentation by the project members to panel of assessors made up of members of DE staff and external experts (10 min) followed by question and answer session (10 min).</td>
</tr>
<tr>
<td>3</td>
<td>Robotics 1</td>
<td>(10%) Group Project Plan written report (10%) Group Project Progress written report (60%) Group Project Final written report (20%) Oral presentation by group members to panel of assessors made up of members of DE staff (10 min) followed by question and answer session (10 min).</td>
</tr>
<tr>
<td>3</td>
<td>Optimisation 1.1 - Fundamental Optimisation</td>
<td>(50%) Unseen written exam (1.5 hours) (50%) Individual project written report</td>
</tr>
<tr>
<td>3</td>
<td>Optimisation 1.2 - System Design and Applications</td>
<td>(50%) Unseen written exam (1.5 hours) (50%) Individual project written report</td>
</tr>
<tr>
<td>Year</td>
<td>Module</td>
<td>Assessment</td>
</tr>
<tr>
<td>------</td>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>Group Project</td>
<td>(10%) Group project interim written report (10%) Individual logbook (60%) Group project final written report (20%) Oral presentation by the project members to panel of assessors made up of members of DE staff (10 min) followed by question and answer session (10 min).</td>
</tr>
<tr>
<td>3</td>
<td>Industry Placement</td>
<td>(100%) Individual coursework</td>
</tr>
<tr>
<td>4</td>
<td>Robotics 2</td>
<td>(70%) Individual project written report (30%) Oral presentation and demonstration of Gizmo final output by individual to panel of assessors made up of members of DE staff (10 min) followed by question and answer session (10 min).</td>
</tr>
<tr>
<td>4</td>
<td>Enterprise Management</td>
<td>(70%) Group project final written report (30%) Oral presentation by the project members to panel of assessors made up of members of DE staff and external experts (10 min) followed by question and answer session (10 min).</td>
</tr>
<tr>
<td>4</td>
<td>Solo Project</td>
<td>(10%) Individual Project Plan written report (10%) Individual Project Progress written report (10%) Log book (50%) Individual Project Final written report (20%) Oral presentation by individual to panel of assessors made up of members of DE staff (10 min) followed by question and answer session (10 min).</td>
</tr>
<tr>
<td>4</td>
<td>Optimisation 2</td>
<td>(100%) project work where the students will complete a team project relate to a contemporary systems design problem where optimization is necessary for trade-off analysis. The project will be different each year, but candidate projects (taken from the research of faculty within the School involved in delivery) include: building design for lower carbon footprint, cyber-physical robotic system design for multiple performance objectives, large scale flood relief systems, optimization of supply chains, and multi-objective design of fire safety systems.</td>
</tr>
<tr>
<td>4</td>
<td>Industrial Design</td>
<td>(30%) Oral presentation by the project members to panel of assessors made up of members of DE staff (10 min) followed by question and answer session (10 min). (70%) Individual project work (portfolio)</td>
</tr>
<tr>
<td>4</td>
<td>Engineering Design Analysis</td>
<td>(50%) Unseen written exam (3 hours) (50%) Individual project written report</td>
</tr>
<tr>
<td>4</td>
<td>Enterprise Roll Out</td>
<td>(10%) Group project interim written report (10%) Individual logbook (40%) Group project final written report (40%) Oral presentation by the project members to panel of assessors made up of members of DE staff (10 min) followed by question and answer session (10 min).</td>
</tr>
</tbody>
</table>
Appendix D – Schemes for the Award of Honours

This document sets out the assessment structure of degrees awarded in the School of Design Engineering, including the criteria for progression and the criteria for the honours classifications. The degrees are composed of Parts corresponding to the years of the course: four Parts for an MEng and three Parts for a BEng. Please note that a BEng exit award is possible in exceptional circumstances, however this is not a route that we recommend normally.

For candidates at the end of the degree programme, a decision is made on whether the candidate has passed and if so, what classification of honours is to be awarded. These decisions are made by a board of examiners which normally meets one week after the end of the summer term and is composed of all teaching staff involved with the degree programmes plus two external examiners appointed from other UK universities. The mitigating circumstances panel will give advice to the board of examiners on how mitigating circumstances, formally notified in advance by a candidate, is to be taken into consideration.

The award of honours is based on the following mark boundaries. These are the same boundaries as used for the grade letters for reporting examination marks throughout the degree programme.

<table>
<thead>
<tr>
<th>Grade Letter</th>
<th>... corresponds to mark (%)</th>
<th>... corresponds to degree class</th>
</tr>
</thead>
<tbody>
<tr>
<td>A*</td>
<td>85+</td>
<td>First class honours</td>
</tr>
<tr>
<td>A</td>
<td>70–84</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>60–69</td>
<td>Upper second class honours</td>
</tr>
<tr>
<td>C</td>
<td>50–59</td>
<td>Lower second class honours</td>
</tr>
<tr>
<td>D</td>
<td>40–49</td>
<td>Third class honours</td>
</tr>
<tr>
<td>E</td>
<td>below 40</td>
<td>Not up to honours level</td>
</tr>
</tbody>
</table>

Final marks are not divulged to students by assessors or the Board of Examiners. The Registrar will release the marks confirmed at Board of Examiners to individual students in accordance with the procedures of Imperial College.

Student marks will be held in an appropriate and secure Student Information System. For candidates not in their final year, the board of examiners will make a decision on whether the candidate may progress to the next Part using the criteria set out later in this document. Again, mitigating circumstances, notified in advance, will be taken into account. It is possible, but not guaranteed, that a candidate who fails a Part can re-sit all the assessments in the following session. In the case of a marginal fail (i.e. with a grade in the range 30–39%) in one, or exceptionally two, modules, the examiners may set a Supplementary Qualifying Test (SQT) to allow the candidate to reach the pass mark and progress to the next part without delay. This course of action is not guaranteed and is only available where the performance in other assessments is very good.
About SQT (Supplementary Qualifying Test)

SQTs are carried out before the start of the next academic year (end of August/beginning of September).

SQTs can take the form of examination or coursework. The decision on the exact form of the SQT will be taken by the module leader and will be designed to ensure that the module learning outcomes are achieved.

SQTs are capped at 40% in cases where a student has failed the module during the year. If a student subsequently fails the SQT, he/she will fail the year. An extraordinary Board of Examiners meeting will need to take place, where it will be decided whether the student will be offered an opportunity to retake the year.

Students may also be permitted to progress to the next academic year if they marginally fail one SQT with a grade in the range 30–39%, and where their overall aggregate mark for the year is 45% or higher. An extraordinary Board of Examiners meeting will need to take place to determine whether the student will be permitted to bring forward the fail grade. This can ONLY be permitted after the SQT (not before).

If a student is taking an SQT following the approval of mitigating circumstances, the 40% cap will not apply. If a student with approved mitigating circumstances subsequently fails the SQT at the first attempt, an extraordinary Board of Examiners meeting will need to take place, where it will be determined whether the student will be permitted to take an additional SQT which will be capped at 40%. If the student subsequently fails this second SQT, he/she will fail the year, and an extraordinary Board of Examiners meeting will need to take place to determine whether the student will be offered an opportunity to retake the year.

Failing to attend an SQT without approved mitigating circumstances will result in a 0% grade, therefore a fail of the year.
Degree Part Weightings and ECTS

The tables below summarise the weightings of marks from each Part when combined into a total for the degree programme and how ECTS are allocated for each part.

**European Credit Transfer and Accumulation System (LINK)**

<table>
<thead>
<tr>
<th>Weightings</th>
<th>Part I</th>
<th>Part II</th>
<th>Part III</th>
<th>Part IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEng</td>
<td>12.5%</td>
<td>37.5%</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>MEng</td>
<td>11.1%</td>
<td>22.2%</td>
<td>22.2%</td>
<td>44.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weightings</th>
<th>Part I</th>
<th>Part II</th>
<th>Part III</th>
<th>Part IV</th>
<th>Total</th>
<th>Bologna Compliant</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEng</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>180</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>MEng</td>
<td>60</td>
<td>60</td>
<td>90</td>
<td>270</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

**MEng in Design Engineering. 2015-16**

**Year One**
Every student must take all modules

<table>
<thead>
<tr>
<th>Modules</th>
<th>ECTS</th>
<th>% of part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction Projects - Term(s): 1</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Engineering Mathematics - Term(s): 1</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Communication in Design - Term(s): 1 2</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Contextual studies in Design Engineering - Term(s): 2</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>Production and Materials - Term(s): 1 2</td>
<td>12</td>
<td>20%</td>
</tr>
<tr>
<td>Design 1 - Term(s): 1 2 3</td>
<td>12</td>
<td>20%</td>
</tr>
<tr>
<td>Engineering Analysis 1.1 - Mechanics - Term(s): 1</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Engineering Analysis 1.2 - Energy and Design - Term(s): 2</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Engineering Analysis 1.3 - Electronics - Term(s): 3</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Computing 1 - Term(s): 3</td>
<td>3</td>
<td>5%</td>
</tr>
</tbody>
</table>

**Progression to Year Two**

- The pass mark for each module is 40%. All modules must be passed in order to progress.
- Supplementary Qualifying Tests in up to two modules, may be offered to candidates whose performance is unsatisfactory
### Year Two

Every student must take all modules

<table>
<thead>
<tr>
<th>Modules</th>
<th>ECTS</th>
<th>% of part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gizmo (mechatronics and robotics) - Term(s): 4 5</td>
<td>12</td>
<td>20%</td>
</tr>
<tr>
<td>Engineering Analysis 2.1 - Advanced Mechanics - Term(s): 4</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Engineering Analysis 2.2 - FEA - Term(s): 5</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Engineering Analysis 2.3 - Electronics for Product and System Design -</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Term(s): 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design 2 - Term(s): 5 6</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Computing 2 - Term(s): 4</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Big Data - Term(s): 6</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Engineering Design Project - Term(s): 4 5 6</td>
<td>12</td>
<td>20%</td>
</tr>
</tbody>
</table>

#### Progression to Year Three

- The pass mark for each module is 40%. All modules must be passed in order to progress.
- Supplementary Qualifying Tests in one module may be offered to candidates whose performance is unsatisfactory.

### Year Three

Every student must take two elective modules, and all non-elective modules. Industrial Placements commence in April

<table>
<thead>
<tr>
<th>Modules</th>
<th>ECTS</th>
<th>% of part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Art Creativity - Term(s): 7 - Elective</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Engineering Design Management and Rationale - Term(s): 7</td>
<td>12</td>
<td>20%</td>
</tr>
<tr>
<td>Design Led Innovation and Enterprise - Term(s): 7 - Elective</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Robotics 1 - Term(s): 8</td>
<td>15</td>
<td>25%</td>
</tr>
<tr>
<td>Optimisation 1.1 - Fundamental Optimisation - Term(s): 7</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Optimisation 1.2 - System Design and Applications - Term(s): 8 - Elective</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Group Project - Term(s): 7 8</td>
<td>15</td>
<td>25%</td>
</tr>
</tbody>
</table>

#### Progression to Year Four

- The pass mark for each module is 40%. All modules must be passed in order to progress.
- Supplementary Qualifying Tests in one module may be offered to candidates whose performance is unsatisfactory.
- A student who has obtained 180 ECTS credits may, at the discretion of the Examiners, be permitted to graduate with the award of a BEng degree.
Year Four
Every student must take two elective modules, and all non-elective modules.

<table>
<thead>
<tr>
<th>Modules</th>
<th>ECTS</th>
<th>% of part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry Placement - Term(s): 9</td>
<td>42</td>
<td>47%</td>
</tr>
<tr>
<td>Robotics 2 - Term(s): 10 - Elective</td>
<td>6</td>
<td>7%</td>
</tr>
<tr>
<td>Enterprise Management - Term(s): 10</td>
<td>6</td>
<td>7%</td>
</tr>
<tr>
<td>Solo Project - Term(s): 10 11 12</td>
<td>18</td>
<td>20%</td>
</tr>
<tr>
<td>Optimisation 2 - Term(s): 11 - Elective</td>
<td>6</td>
<td>7%</td>
</tr>
<tr>
<td>Industrial Design - Term(s): 10 - Elective</td>
<td>6</td>
<td>7%</td>
</tr>
<tr>
<td>Engineering Design Analysis - Term(s): 11 - Elective</td>
<td>6</td>
<td>7%</td>
</tr>
<tr>
<td>Enterprise Roll Out - Term(s): 10 11 12</td>
<td>12</td>
<td>13%</td>
</tr>
</tbody>
</table>

Successful Completion Criteria

- The pass mark for each module is 40%. All modules must be passed in order to be awarded the MEng.
- Supplementary Qualifying Tests are not available in the final year.

BEng in Design Engineering

In order to provide a route for students who are unable to complete an MEng we have defined a BEng route. This is not a route we promote nor recommend and we do not recruit students onto the BEng. The BEng is not accredited and does not satisfy the requirements for chartered status. As such we recommend to the vast majority of students that students only take the MEng route, which represent the gold standard qualification. Students who do not meet the requirements for progression to Year 4 (MEng), will be considered for the award of BEng in Design Engineering, with a total of 180 ECTS.

BEng students will be required to choose two elective module in Year III and will graduate following the completion of Year III with 180 ECTS credits.

**IMPORTANT**

A BEng does not on its own satisfy requirements for chartered status and we are not seeking accreditation for this award.