

This booklet is here to provide you with information you need to prepare for your arrival, settle in and make the most out of your Department. It is laid out in chronological order so that you can “work through” it from online registration to finding your way around the campus. The College also has an online repository for [New Students](#) containing information about accommodation, finances, visas and more.

This Welcome Booklet was first compiled by student June Gan at the end of the second year of her degree with help and advice from many of our undergraduate students who answered her questions and completed surveys; it has been updated over the summer of 2022.

Please use the following email address for all enquiries i.e. timetable, programme transfers, general queries:

chemugadmin@imperial.ac.uk

Please always use your College email address when contacting College staff.

If in doubt **ask**.

We are here to help but can only do so if you let us know what you need help with!

Term dates

- **Autumn Term:** Saturday 1 October to Friday 16 December 2022
- **Spring Term:** Saturday 7 January to Friday 24 March 2023
- **Summer Term:** Saturday 29 April to Friday 30 June 2023

We look forward to seeing you in the Department on **Monday 3rd October 2022**.

You can find [Provisional Term Dates for academic year 2022/23](#) onwards online.

The College and the Department expect you to be available for all term-time activities. However, if you need to be absent during term-time please [contact Amelia](#) prior to taking leave of absence.

Some important information on communication

Once you have registered (which you can do online from the start of September: please see page 14 for more details). You will be able to use your College ID to get access to Microsoft 365 software for free! You'll be able to install the latest version of Microsoft Word, Excel, PowerPoint, OneNote and much more on up to five compatible, personally owned PCs and Macs, plus five tablets, including iPad. Read more about [using Office 365](#) on the Imperial website.

The Department will communicate most information via your college email, please check your college email daily. Once your college email is set up, please only use this email to contact the department.

Please always include your CID number when sending emails.

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Welcome to Chemistry from your HoD

Dear all,

Welcome to the Chemistry Department of Imperial College!

You have all done brilliantly to have gained your place here and we are really honoured that you have chosen us as your place of further study. You will, at some time or another, be taught by every one of our 65 academic staff, headed up by our Director of Undergraduate Studies. We, like you, come from all over the world and have chosen to teach at Imperial College because we strongly believe it is the best place to study Chemistry. We all look forward to meeting you.

We pride ourselves at Imperial College on being welcoming and treating everyone as equals with the diversity of the university being at the heart of what makes it such an exciting and vibrant ecosystem. This is a culture we encourage our students to embrace, as you meet and continue to work with your colleagues and all staff in the Department. Our close-knit community is one of the things that makes the Department such a special place.

During your studies here, we hope to show you how exciting, stimulating and useful modern Chemistry is in the world. You will find that studying at the cutting edge of a subject at University requires a great deal of commitment and probably more independent work than you were used to at school. We know that this transition from school to University can be tricky and now more than ever given the impact of Covid-19 but rest assured that our staff and tutors will always be happy to help you with your studies. We are one big community and we are here to help. No question, query or concern is too big or too small. We will always be on hand to help you with everything from administration through to advice on exam practice and daily life in London.

It might surprise you in a college that expects a strong commitment to your studies that Imperial has one of the highest levels of student society activities of any university in the country. There really is something for everyone, and we hope that you find something in these that you enjoy doing. If you can't, you can always start one of your own! We have our own student society "ChemSoc" which organises regular talks and social events, and we also have regular departmental events where you can discover that your lecturers are human beings too. Please get involved with these opportunities and go along to the events. Imperial is an amazingly exciting place to be part of and we want to make sure your time here is both fun and rewarding.

We hope that you enjoy your studies here at Imperial and look forward to meeting you all.

Best wishes,



Oscar Ces
Head of Chemistry Department (HoD)



Welcome to Chemistry from your DUGS

Dear All,

May I join our Head of Department in welcoming you to Imperial Chemistry! It goes without saying that you're very excited to be starting at Imperial and beginning life in London, and in order to help you settle in, we have compiled this welcome booklet to help you in the first few weeks. While it can't cover everything you need to know, it outlines the basics and will help to get you started. My role as Director of Undergraduate Studies (DUGS) is to manage the undergraduate degree programmes and to make sure that we provide you with the best opportunities during your studies.



If I think back to when I started at University (I was an Imperial Chemistry undergraduate from 1980 to 1983), I can remember being excited but also a bit daunted: I didn't know anyone and I didn't really know what to expect, and my guess is that you're experiencing similar feelings right now. But please don't worry; these feelings will soon evaporate. For sure these next few years are going to be challenging in terms of the hard work you will need to put in, but they'll also be immensely rewarding and hugely enjoyable. You'll make life-long friends whilst at Imperial and you'll have myriad opportunities. The effort you put into everything you do during your time here will be reflected in what you achieve.

Finally, I know I speak for everyone here in offering you a very warm welcome to our community. We're looking forward to meeting you and to helping you become the best you can be over the coming years.

Don Craig
Director of Undergraduate Studies (DUGS)

Welfare and Support: Head of the Student Experience and Pastoral Care

Dear Students,

Congratulations on passing your exams and I hope you enjoyed your break over the summer.

I am the Head of the Student Experience and Pastoral Care and Senior Tutor (Amelia) and I am here to ensure you enjoy every aspect of your course and receive support if required. I am also the Senior Tutor.

Together with the DUGS, the Heads of Teaching sections and the Year Tutors I am responsible for the development and delivery of the academic support structure for our undergraduates, and we'll be in regular contact over the course of the year to provide information and to listen to your feedback.

I also act as the first point of pastoral care for all of you, and I'll be available at any point for a chat or to help with any worries you may have regarding your wellbeing or for academic issues.

My door is always open so please do come and introduce yourself.

I look forward to meeting you all.

Amelia Barron

amelia.barron@imperial.ac.uk

Head of the Student Experience and Pastoral Care



Your Year Tutors

Year Tutors act as deputy senior tutors for the year. They are themselves highly regarded personal tutors and are able to support personal tutors in their duties.

Your Year Tutors will be **Dr Luke Delmas** and **Dr Giuseppe Mallia**. In the first instance you should always contact your personal tutor if you need advice or help. However, the Year Tutors, Amelia and the DUGS are also available for further advice or help – please just ask!



Luke Delmas

l.delmas14@imperial.ac.uk



Giuseppe Mallia

g.mallia@imperial.ac.uk

Info Bite

Most staff operate an ‘open door’ policy, meaning that anyone is welcome to knock on their door and speak with them. Please note that this is only intended for brief meetings; if you need a longer timeslot, email them to arrange an appointment!

Student Support Services

[Student Support Services](#) is a hub of information for all students on a wide range of health and wellbeing issues and includes comprehensive information about accessing support and information through internal and external services.

Meet your Dep Rep

Welcome to the Imperial Chemistry Department!

First of all, massive congratulations for getting into Imperial! We are very happy for you to be joining us in the department and I'm sure you'll have an amazing time here.

My name is Xinran (you can also call me Chelsie), I will be your Academic Departmental Representative for this year (Dep Rep for short!). My role will be to work closely with the department to ensure the best student experience and to make sure everything runs smoothly. Most importantly, I will be a voice for students in meetings, passing on and acting on your feedback to ensure you have the best time at Imperial possible. This is especially important now that teaching in university has transitioned into a 'post-COVID version', combining remote and in-person modes together, which is still new to both students and the department.

I work with Chinny, the Wellbeing Dep Rep, to oversee a team of volunteers, the Year Representatives, who are our eyes and ears in their respective years. We all act as a bridge between students and the department. If this sounds like something you'd be interested in feel free to get in touch with me to chat about it and look out for Union emails about the autumn elections, when Reps are chosen by their cohort.

You're joining a fantastic department in a world-class university in the heart of London. There will be many activities available for you to do both academically and socially, so make the most of it! Whether that means joining societies at the Union Fair or going to ChemSoc seminars with amazing speakers, you will find something you'll enjoy doing.

There is a lot of support available in our department and in college, so if you have any problems, whether it's something you didn't understand in a lecture, or you're finding it a bit difficult settling into uni life. All you have to do is asking for help! If you ever have any questions, problems or concerns, or want to pass on any feedback about any aspect of the course (negative or positive!) please don't hesitate to drop me an email. My Dep Rep email is chedrep@ic.ac.uk.

Hope you have a wonderful uni life here! 😊

Xinran Li

Chemistry Academic Departmental Representative

Email: chedrep@ic.ac.uk



Meet your Wellbeing Dep Rep

Welcome aboard Imperial Chemistry!

Congratulations on getting into imperial! Starting university can be daunting, what with new environments, new routines, and new people. Not to mention dealing with all that in the middle of a pandemic! Don't worry if you're nervous, its completely normal, most of us have gone through and some are still going through the adjustment 😊 Don't be afraid to reach out for help if you need it.

Work hard to make memories and friends while you're here. When you visit Fresher's Fair, be sure to sign up for at least 1 taster session, as these give you an opportunity to discover new things that you may like. They're also great for meeting new friends outside of Chemistry.



Activities organised by your halls and the Student union are also great for meeting new people who you might have otherwise never have known had so much in common with you. These activities are always open to all!

Every October, each year group selects a year rep for wellbeing and academics, the year wellbeing reps and I meet regularly to discuss how to promote positive wellbeing and healthy living across the department. Speaking to your year reps or running as year rep are one of the best ways to voice your views and the views of your cohort, and make sure that they get to the right people.

If you have any wellbeing issues, don't hesitate to talk to me in person or pop me an email. I and the rest of the wellbeing team can help direct you to the right person/service including the student Advice Centre, Student Hub, and the Counselling Service.

If you have any ideas how we can improve wellbeing across Chemistry, drop me or your year rep an email anytime or chat to us in person.

May these coming years be some of the best in your life.

Chem Love,

Chinny Lee

Chemistry Wellbeing Departmental Representative

Email: chemistry.wbrn@imperial.ac.uk

Meet your ChemSoc President

Welcome to

I ⁵³	M ¹²⁷	P ¹⁵	Er ⁶⁸	I ⁵³	Al ¹³
Iodine	Mithril	Phosphorus	Erbium	Iodine	Aluminum

Congratulations on getting into Imperial and joining one of the top universities in the world! You have all worked so hard to get these top results in such weird times and you should be so proud of yourself for such an amazing achievement.

My name is Brad and I am going to be your ChemSoc president this year. We are a student-run society that is there to improve both your academic and social lives during your time at Imperial! To get you away from deadlines and lab reports, we already have a wide range of events planned and there truly is something for everyone. From quiz nights to pub crawls to Mario Kart tournaments and film screenings, my committee and I are so excited to welcome you to the Imperial Chemistry family. Furthermore, leave your air fryer at home (trust us, you won't need it) and pack your suits, tuxes and dresses as we love a good night out and already have an Autumn Ball and Christmas dinner in the works – keep an eye out on your inboxes for tickets!

We also run a very successful seminar series where we invite accomplished speakers to discuss their research with you. Previous examples include recent Nobel Prize Winner William Moerner, British astronaut Dr Helen Sharman and former Chief Scientific Advisor, Sir David King. This is a great opportunity to discover what specialisms in science is most suited to you. We also run a Careers Fair in autumn and different companies come to give you insight into various industries and display what internship opportunities are available.

I'm sure you've already thought about what life at university is like, and I can assure you that everyone else is probably thinking the same thing. You are all going into this together and ChemSoc is here to help facilitate this transition and make it as smooth and stress-free as possible. We have a Mum and Dads scheme where you will be paired with some older students. They are there to answer any questions you may have and address any of your concerns regardless of if it's about the course or settling into fresher life. They may even take you out for pizza and drinks!

Despite what everyone says, Imperial is more about books and Imperial College Union boasts over 340 clubs and societies. There is a club for literally everyone and they are a great way to meet like-minded people and pursue your passion. Make sure you join lots of mailing lists at the fresher's fair!

Once again, huge congratulations on all your hard work and getting into Imperial. Have a great rest of the summer and I can't wait to meet you all in October!

Much Chemlove,

Brad Shek



Get to know me

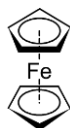
Favourite Element? Uranium. I've done projects on it and the complexes it forms are quite interesting

Any hobbies? Gym, going out with friends, trying different restaurants

Best advice you've received? We don't rise to the level of our expectations, we fall to the level of our training

Where can you find me? I spend a lot of time on campus, usually in the new Chemistry Common Room. Come say hi if you see me!

If you had any questions or concerns about ChemSoc or settling in, feel free to email me at bhs20@ic.ac.uk or chemsoc@ic.ac.uk



Keeping up with ChemSoc

Information about upcoming events will be sent out in the ChemSoc weekly email and posted on [our Facebook page](#). Photos will be posted on Facebook and [our Instagram](#). If you have any suggestions, you can [email ChemSoc](#).

“Mums and Dads”

The buddy system is the first scheme you will encounter by ChemSoc. Freshers are grouped into “families” of 4-5 and will meet their “parents” in the first week. The “parenting” scheme is the perfect chance for you to interrogate the upper years about their experience so far, but this is not restricted to chemistry: Imperial offers a huge range of other societies, so get involved! Make sure not to miss out on the Freshers Fair!



The Fun Side

Our flagship social event is the ChemSoc Christmas dinner: more than 200 students and staff members within the department come together every year to enjoy a delicious meal and an evening of music, dancing, and good company, so don't miss out! We will be hosting all sorts of events! Recently we've held Competitions in our Chemical Kitchen and Mario Kart racing tournaments – keep your eyes out for any announcements on that front!



Join our Chemistry freshers' group on Facebook, it is a great place to ask questions as only students are members.

Introducing your Department

The Department of Chemistry at Imperial was established with the Royal College of Science in 1845. Since then it has grown to become one of the largest departments in the UK, recognised as a world-class institution for both teaching and research.

We boast more than 75 academic staff, many of whom are internationally renowned in their own fields, and distinguished former colleagues include five Nobel Prize winners including Sir Derek Barton, Lord George Porter and Sir Geoffrey Wilkinson (who even has a hall of residence named after him).

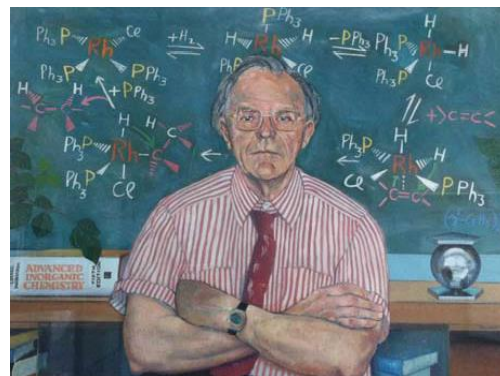
Other famous alumni include Sir Patrick Linstead (who also lends his name to a hall of residence), Henry Armstrong, Sir William Crookes and Sir William Perkin, who discovered the dye mauveine in this very Department and is now considered the father of the synthetic dye industry.

The Imperial learning experience is due to two main factors – your hard work and our teaching. In the 2020/21 academic year, Dr Charlotte Sutherell was presented with a [President's Teaching Award](#).

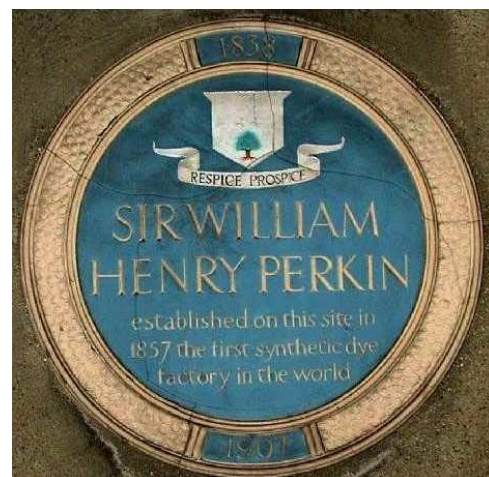
Further Faculty teaching awards were bestowed upon [Prof. Fernando Bresme](#) and [Prof. Saif Haque](#) in the 21/22 academic year in recognition of the high quality of the education the Department provides.

However, our prowess does not stop purely at teaching. [Prof James Durrant](#) has been awarded the CBE for services to photochemistry and solar energy research. [Prof. Tom Welton](#) served as RSC president from 2020 – 2022. Moreover, Prof. Mike Bearpark is one of the developers of the Gaussian program, widely used in computational chemistry. If you are keen to learn more about our research please visit [our research webpages](#).

The feeling of being immersed in such a globally-acclaimed Department is second only to the friends you make here. Our undergraduate cohort is international, with over 750 students from all four corners of the world, and this diversity is just another jewel in our crown.



Sir Geoffrey Wilkinson



Blue plaque in Greenford near the Grand Union Canal. Photo credit to Wikipedia



RCS Building

Student Services Centre

You can find the Student Services Centre on the 2nd floor of the Chemistry building, next to the Chemistry Café.

Staff here are available to answer questions about exams, timetabling, degree transfer and or any other questions you have about your course. They're also the people to ask if you're not sure who to speak to!

You can speak to them in person or you can contact them on their emails below:



Raj Sandhu

Undergraduate Education Manager

r.sandhu@imperial.ac.uk



Cristebel Groves

Admissions and Exams Administrator

c.groves@imperial.ac.uk



Sarah Johnson

Undergraduate Teaching Administrator

chemugadmin@imperial.ac.uk



Bethan Hoare

Undergraduate Teaching Administrator

chemugadmin@imperial.ac.uk

Before you arrive

Another year has passed and we are busily preparing for our new intake of students. The academic year begins on Monday 3rd October for all new students, with welcome events and inductions throughout the first week. For [new international students](#), there is a separate series of talks before the start of term.

There are webpages on the Imperial College website [for new students](#):

- [Registration](#)
- [Records and data](#)

Registration now takes place online, and opens from the start of September. You should have received instructions via email on how to register, including instructions on how to set up your College email account.

In summary, all students are required to fill in their personal details on Student e-Service and upload a photograph which will be used for your College ID card (CID). This option is only available up until the day before the course starts.

If you are a non-EEA national you will need to ensure you register in person with the College to meet UK Visa and Immigration requirements. You can find more information about [registering in person](#) on the Imperial website.



The Mingle is the Union's official fresher's welcome party.

Info Bite

Your college email address is your main point of correspondence with your personal tutor, course administrator or any other college staff

College ID cards

Your CID is your identification card in and around campus, allowing you to access your halls, departmental buildings and the library. It also gets you the student price for food in the catering outlets on campus as well as places across London. You can find information about [College ID cards](#) on the Imperial website.

Most students will receive their CIDs on move-in day, but in case you do not fall into this category, the table below covers the different scenarios.

	Students in Halls of Residence	Students in Private Accommodation
Photo uploaded, arriving in week 1	Receive ID card on move-in day	ID card will be sent to your department for distribution
No photo, arriving in week 1	Bring Registration Confirmation to Security and have your photo taken. ID card sent to your department for distribution	Bring Registration Confirmation to Security and have your photo taken. ID card sent to your department for distribution
No photo, arriving after week 1	Bring Registration Confirmation to Security and have your photo taken where you will be issued with your ID card immediately after having your photo taken.	Bring Registration Confirmation to Security and have your photo taken where you will be issued with your ID card immediately after having your photo taken.

The Year 1 Programme

The exact Year 1 Modules you will study depend on your choice of Degree Programme but there is a core syllabus that all first year Chemistry students follow no matter which programme they are on.

The core syllabus is made up of Chemistry lecture course modules as well as a Practical Chemistry module which includes several different laboratory and other practical courses.

Alongside the core chemistry lecture course modules you will take what is known as an ancillary subject. In some cases, this is already set e.g. F124 students on Chemistry with Medicinal Chemistry programme must take "[Medicinal Chemistry 1](#)" ancillary. Other degree programmes offer a choice of chemistry or "[Horizons](#)" (languages and general interest) ancillary subjects.

You have also been sent a link to our ancillary choice questionnaire: please complete this as soon as possible and no later than **Wednesday 7 September 2022**.

Year 1 Chemistry modules

Module Title	Term	Module Leader
i-Engage	1-3	Oscar Ces
Language of Chemistry	1	Charlotte Sutherell
Structure and Bonding: Atomic Structure to Molecular Orbitals	1	Mike Bearpark
Introduction to Spectroscopy	1	Phil Miller
Reactivity at Carbon Centres	2	Don Craig
The Reactions Toolkit: Thermodynamics and Kinetics	2	Nick Brooks
Chemistry of the Elements: Hydrogen to Uranium	2	George Britovsek
Maths and Physics 1 Ancillary	1-2	João Malhado
Medicinal Chemistry 1 Ancillary	1-2	Simon Gerrard
Practical Chemistry 1: to include Chemical Kitchen Lab; Measurement Science Labs; Synthesis Labs; Computational Labs	1-3	Laura Patel

"Horizons" is a College-wide programme of language and general interest modules. Students on some degree courses may take these as an ancillary subject counting towards their degree. If you choose a chemistry ancillary subject you may still take a Horizons module as an extra, just for fun and not counting towards your degree. More about these on Page 20.

Imperial Mobile

Imperial mobile is the way that most students access information regarding their timetable, email, our virtual learning environment (BlackBoard) as well as many central College and Student Union services and information.

You can find [more information about the app and how to download it](#) on the Imperial website. You can also scan the QR codes below to download the app:

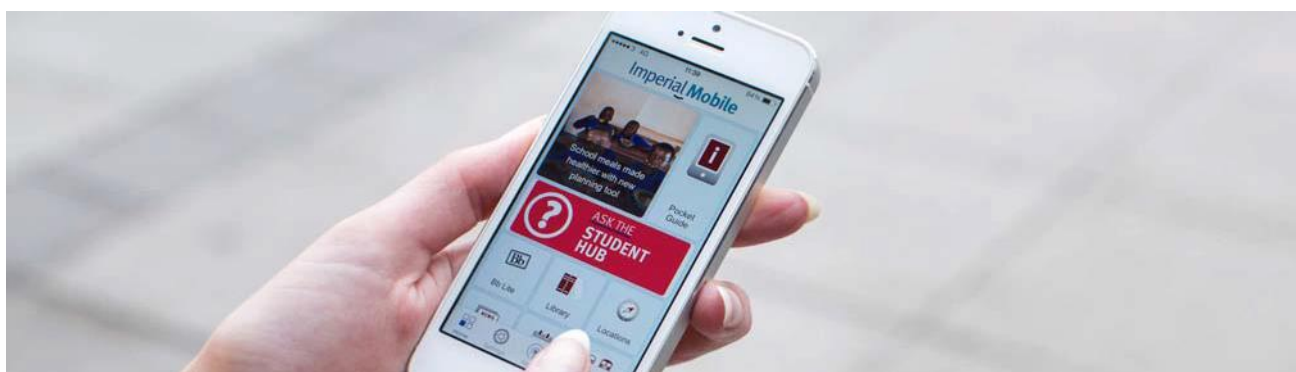


IOS



Google Play

We are really keen that you download the app as soon as you are able and once timetables are released, use the app to access your timetable on a regular basis. Our timetables do change and whilst we make every effort to make sure you are aware of any planned changes it is important that you check your timetable via the app on a regular basis.



Choose your Ancillary

Ancillary modules are supplementary courses to the core syllabus. For most students, this will be an unrestricted choice of any of the following ancillaries listed, but some degrees have pre-determined ancillaries (e.g. F124 must choose Medicinal Chemistry 1). The courses take up 50-60 teaching hours across the Autumn and Spring terms and are largely examined in the Summer term.

You may want to participate in the Imperial Horizons scheme, either as an ancillary choice or in addition to your chosen ancillary. When taken in addition, it will not contribute credit points towards your degree, and is designed to broaden your education. Topics include Science, Society and Culture, languages, humanities and Change Makers, and will develop your skills in problem-solving, communication and teamwork.

[Further information on the ancillaries](#) and Horizons can be found in the following pages and on the Imperial Website. If in doubt, ask a question on the Chemistry Freshers Facebook group or [contact Amelia](#). The Department allows you to change your ancillary within the first few weeks of term but the deadline for ancillary choice transfers is the end of week 5 (Friday 4 November).

Medicinal Chemistry 1

Please note: This module is compulsory for students registered on the F124 and F125 degree programmes but may be taken by students on the following programmes as well: F100, F101, F103, F104, F105, F1NF, FN11.

The module aims to introduce you to the principles that underpin Medicinal Chemistry including the modern Drug Discovery process, the structure, function and role of biomolecules in cells and as drug targets. It will bring in fundamental concepts in molecular biology, drug design and pharmacology, to provide a foundation for future years.

A-level Biology (or AS-level) is recommended but is **not** a requirement. Relevant biological content will be introduced as the module progresses, in the context of modern drug discovery. The module is taught through lectures along with several workshops, drop-ins and other sessions to support your learning, and additional resources to help you, especially if you haven't taken A-level Biology. This module is a pre-requisite for the year 2 module, Medicinal Chemistry 2 – compulsory for students on F124 or F125 degree programmes.

The module is divided into four sections, with lectures given by staff from the Chemistry Department and from the pharmaceutical industry, covering the following areas:

1. Drug Discovery – an industrial overview of the process.
2. Structure and function of proteins and nucleic acids and their importance in medicinal chemistry.
3. Introduction to Medicinal Chemistry, including drug properties, pharmacokinetics and drug design.
4. Principles of Molecular Biology – drug targets, cell signalling and enzymes, in the context of drug discovery.

If you have any questions please contact the Course Coordinators: [Dr Simon Gerrard](#)

Students Say:

I thought all the modules were taught well. They were all interesting, although you shouldn't underestimate how much there is to learn! It's fine though, I just started revising earlier.

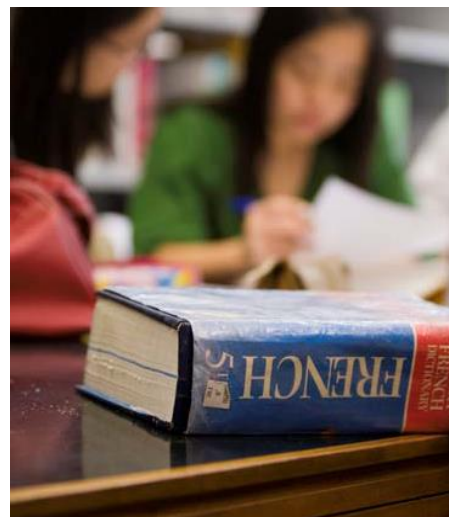
Languages

Find out more about language courses on [the Horizons website](#).

The appropriate language modules are compulsory for students registered on the F101*, F104*, F1R1, F1R2 and F1R4 degree programmes. *if you intend to go to a non-English-speaking institution and country.

Currently French, German and Spanish are available. All language modules are based on a communicative approach, covering all four skills (speaking, listening, reading and writing) and at the higher levels, in addition to a thorough introduction to the pertinent culture and society, you will be able to give presentations on chemistry, read general and specialist articles as well as contribute to discussions on a wide range of topics. Assessment is by coursework throughout the year as well as one written and one oral examination.

Please note: If you are registered on F100, F101*, F1N2, F103, F104*, F105, F1NF, FN11, (*and you intend to go to Singapore, the Netherlands or the USA) you may take any Horizons language module as your ancillary in your 1st year (if your course does not have a set ancillary).



Students Say:

The Spanish course was varied and interesting. It helped to complement my Science studies but also gave me diversity as I had the opportunity to study some Spanish literature, history and politics.

Students Say:

There's a lot of content delivered very quickly in M&P1 but if you have an interest in this area then this is definitely worthwhile; it also makes the physical chemistry courses far easier.

Maths and Physics 1

Please note: This course is compulsory for students registered on the F1F3 and F1FH degree programmes. However, it may be taken by the following programmes as well: F100, F101, F103, F104, F105, F1NF, FN11.

The course comprises a series of lectures and workshops given by staff from the Departments of Mathematics and Physics covering the following topics:

- 1) Mathematics: Linear algebra and vector spaces; ; Ordinary differential equations (ODEs); statistics, probability distributions and Baye s rule.
- 2) Physics: basic mechanics, vibrations and waves.

A-level Physics is recommended but not mandatory for this course.

A predisposition to study Mathematics is essential for this course.

Please contact the Course Coordinator [Dr João Malhado](#) if you have any queries.

Imperial Horizons

Imperial Horizons offers you the opportunity to enrich your education, enhance your CV and impress future employers. We offer a wide range of modules to stimulate your personal, professional and intellectual growth. Options are available from three fields of study.

1. Change Makers
2. Humanities & Social Sciences
3. Languages

Feedback from student surveys

Change Makers: “I'd never really thought about the ethical side of science before, so I've learnt a lot, and a new way of thinking about the science from my degree too.”

Humanities & Social Sciences: “Amazing module...It has far exceeded my expectations. It has really developed my understanding of culture, society, people, ideas, discourse...The conversations are fascinating, and on multiple occasions the two hours of the session fly by leaving me disappointed that it's over.”

Languages: “I enjoyed this module! I think it was very well-structured and included some very interesting topics ...especially the topics relating to science. I also thought that there was a good balance between grammar, comprehension, listening, etc.”

Key benefits

Transferable skills. Our modules will help you to develop transferable skills such as communication, team-working, problem-solving, business and organisational awareness.

Make your degree transcript stand out. If you take an Imperial Horizons option for degree credit your final mark will appear on your transcript. If you take it for non-credit or extra-credit only 'pass' 'merit' or 'distinction' will show, and 'fails' will not be recorded.

Free and during normal teaching hours. There is a dedicated Imperial Horizons time slot for each year group. No additional fee is charged for Imperial Horizons.

First Years:	16.00-18.00 on Tuesdays
Second Years:	16.00-18.00 on Mondays
Third and Fourth Years:	16.00-18.00 Thursdays

Please note: Imperial Horizons modules run subject to sufficient demand, resources and current College guidance. It is possible that modules may have to be withdrawn or changed at short notice in response to changing circumstances.

I-Explore

Imperial Horizons is one of the options available for students taking an I-Explore module as part of their degree in their 2nd or 3rd year, but you can also take an Imperial Horizons module in any of your undergraduate years as an additional module for extra-credit or non-credit. So why not enrol for an Imperial Horizons module in your 1st year?

Enrolment

Online enrolment takes place via the Imperial Horizons website.
Enrolment Dates for Incoming 1st years

Enrolment opens – Wednesday 7 September

Enrolment closes – midnight on Tuesday 11 October

To find out more, visit [the Horizons website](#). Please note the website will be updated for Academic Year 2022-23 by 7th September 2022.

Industrial Placements and Internships

The job market is a competitive space for graduates. A proven way to give yourself an edge over other graduates is by completing work experience during your undergraduate studies.

We work closely with potential employers, and are regularly told that graduates are specifically targeted who have completed work experience, as these individuals are recognised as having gained transferrable skills, demonstrated professionalism, and be considered job-ready.

To support you in finding and applying for suitable 12-month placements, summer internships and graduate jobs, there are a number of specific events run by the Department in collaboration with both Imperial's Career Service as well as our employer network. Although finding a position will ultimately be your responsibility help will be available at every step of the process.

If you wish to gain work experience during your undergraduate degree, you may be interested in transferring on to our degree programmes that include a Year in Industry – **FN11, F105, F125, F1FH, F101**.

In these 5-year programmes, a 12-month placement is completed at a host company within a graduate level role during Year 4.

Imperial Chemistry alumni have previously completed placements at the following companies:

- AstraZeneca
- De La Rue
- CSIRO, Australia
- 3M
- Cambridge Display Tech Ltd
- Hexcel Ltd
- AkzoNobel - ICI Paints
- Deutsche Securities Inc
- Home Office Scientific Development Branch
- AkzoNobel - International Paint Ltd
- Diageo
- Johnson Matthey
- Analytical and Tracer Solutions (Tracerco)
- DSTL
- Imerys
- AstraZeneca
- Element 6
- Lubrizol Limited
- AWE
- F Hoffmann La Roche Ltd
- Bristol-Myers Squibb
- BASF
- Firmenich
- Merck Chemicals Ltd
- Boehringer Ingelheim
- GSK
- Merck Sharp & Dohme
- British American Tobacco
- Heptares Therapeutics
- Mitsui OSK Bulk
- Novartis
- Radox Laboratories
- Schlumberger
- Pfizer Ltd
- Mondelez
- Solvay Chemicals
- Plaxica
- Rutherford Appleton Laboratory STFC
- UCB
- Syngenta

Mathematics for Chemistry

Dear Students,

We hope that you had an enjoyable summer and are looking forward to commencing your Chemistry degree, here at Imperial College.

You will find out that a lot of Chemistry involves some Maths! This could be converting units and calculations in the lab, solving rate equations in Chemical Kinetics or solving the Schrodinger Equation in Quantum Chemistry amongst many other things. In your undergraduate studies, you are going to need a lot of the Maths you've learnt at A-level (or equivalent), as well as a little bit more.

So that you can feel as confident as possible with using Maths in your course, we'd ask you to revise the topics specified on the revision check-list, provided on [pages 23 and 24](#) in the handbook. This revision shouldn't require too much of your time, as most (if not all) of these topics should have been covered in your final school maths qualification (for instance, A-level maths). The techniques of integration and differentiation are important so will be reviewed at the start of the course, but any reminding you have done yourself will help you.

In Year 1, you will take a course covering Maths topics you need to know in order to deal with the more mathematical aspects of Chemistry. This course forms a part of the module 'Language of Chemistry'. In Term 1 this will focus on mathematical techniques and in Term 2 you will be applying Maths to solve problems in Chemistry and interpreting chemical phenomena in mathematical language.

You'll hear lots more about how the maths course will work at the start of term!

We hope that you will find our Maths course useful and enjoyable, and we wish you every success in your undergraduate studies.

The Mathematics for Chemistry Team,

Clotilde, Alexei and Laura

Revision Checklist

General arithmetic without the use of a calculator (addition, subtraction, multiplication and division)

- Significant figures (including having to multiply or divide numbers expressed with differing numbers of significant figures)
- Rearrangement of algebraic expressions including those that involve simple powers and roots. This will include, but not be restricted to, factorisation and changing the subject of an equation.



Conversions between units

Whilst chemists try to use SI units where possible, many quantities are in fact more easily discussed in the older units

For example, it's easier to say that a photon has an energy of 2 eV than an energy of 3.20438×10^{-19} J! Or that the bond length of the OH bond in water is about 1 \AA rather than 10^{-10} m .

Thus you will find units such as Angstroms (\AA) and electron volts noted to the right.

You should also be able to:

- Convert between moles and number of molecules
- Calculate number of moles from mass

Trigonometry and Algebra

- Basic Trigonometrical Identities
- Plotting trigonometric functions without the use of a graphical calculator. This will include functions of the form $A \sin(kx)$, $A \cos(kx)$ and $A \tan(kx)$ where A and k are constants.
- Calculating the volumes and areas of cylinders, spheres and cuboids.
- Obtaining algebraic solutions to simultaneous equations.
- Explaining the difference between explicit and implicit functions.

Key terms: Units

Lengths: km, m, dm, cm, mm, μm , nm, \AA , pm.

Areas and volumes based on the length units cited above.

Energy: Joules (J), calories (cal), electron- volts (eV).

Temperature: Celsius ($^{\circ}\text{C}$), Fahrenheit ($^{\circ}\text{F}$), Kelvin (K).

Pressure: atmospheres (atm), Pascals (P), bar, torr.

Speed: m/s, cm/s, km/h, miles/h.

Angles: radians, degrees.

Bases, Powers and Logarithms

Multiplication and division of numbers or equations expressed in terms of bases and powers (i.e. in terms of the form a^x and/or 10^x). The powers may be positive, negative and fractional (e.g. a^2 , a^{-2} , $a^{1/2}$). Examples include (but will not be restricted to):

$$\begin{aligned}a^x \times a^y &= a^{(x+y)}; \\ a^x \div a^y &= a^{(x-y)}; \\ (a^x)^y &= a^{(xy)}\end{aligned}$$

The use of the logarithmic functions \ln and \log :

$$\begin{aligned}\log(a) - \log(b) &= \log\left(\frac{a}{b}\right) \\ \log(a) + \log(b) &= \log(ab) \\ \log(a^b) &= b \log(a)\end{aligned}$$

Differentiation

Polynomials including functions of the form $f(x) = ax^b$

Exponentials and logarithms e.g. $f(x) = b e^{ax}$; $f(x) = a \ln(x)$

Trigonometric functions e.g. $f(x) = A \sin(kx)$; $f(x) = A \cos(kx)$; $f(x) = A \sin^n(kx)$; $f(x) = A \cos^n(kx)$

Using the **chain rule**: $\frac{dy}{dx} = \frac{dy}{du} \times \frac{du}{dx}$

Using the **product rule**: $\frac{d(u \times v)}{dx} = u \frac{dv}{dx} + v \frac{du}{dx}$

Using the **quotient rule**: $\frac{d\left(\frac{u}{v}\right)}{dx} = \frac{v \frac{du}{dx} - u \frac{dv}{dx}}{v^2}$

Integration

- Power functions (e.g. $dy/dx = ax^{n+1}$)
- Logarithmic, exponential, sin and cos functions
- Using integration to calculate the area under a graph (i.e. integration with limits)

Graphs

- Sketching linear, quadratic, exponential and logarithmic functions without the use of a graphical calculator.
- Determining turning points (maxima and minima) using the second differential of an equation.

Further Information for Students with Disabilities

Welcome to the Department!

My role as the Departmental Disability Officer (DDO) for Chemistry is to be your first point of contact for any questions or matters relating to disabilities. I work in collaboration with the central Disability Advisory Service (DAS), the college's medical centre and academic registry to organise and implement any support or adjustments to reduce barriers that you might face as a result of conditions that could impact your studies (e.g. long-term health, physical, specific learning differences).

For example, I can apply for special examination arrangements on your behalf or discuss adjustments for you in confidence with lab coordinators. You can also come to chat to me if you have specific questions about the course, studies or departmental facilities.

The sooner you make contact with us the better! You can disclose information at any time during your studies at Imperial College, but the earlier you do so the sooner we can arrange for you to meet an advisor from DAS, gather any evidence needed, and ensure support is in place for you.

Anything you want to discuss is **confidential**. You can contact me via e-mail or arrange to meet online or in-person – whatever you are most comfortable with.

If at any point during your time at Imperial you think you have an undiagnosed condition that is affecting your studies, contact me and I advise you on how you can explore this.

The next page of this booklet contains more information where you can read about some of the support and adjustments available. More information is available on the [DAS website](#).

Students with autistic spectrum conditions have the option of attending a [two-day transition event](#) run by DAS before Welcome Week (in person 30th September, online 3rd October). If you declared this on your UCAS application, DAS will automatically contact you with an invitation. If you have **not** yet declared autistic spectrum condition but would be interested in attending, please contact me ASAP and by 12th September at the latest.

Finally, if you have any concerns, don't hesitate to contact me before you arrive!

Dr Charlotte Sutherell

c.sutherell@imperial.ac.uk

Departmental Disabilities Officer



What to do when you have or think you have a Disability

When You Arrive

Before you arrive, or as soon as possible afterwards, please contact both the Departmental Disability Officer (DDO) and the [central college Disabilities Advisory Service \(DAS\)](#). The DAS offers confidential advice and support to ensure that you can study successfully, from reviewing recommendations for adjustments in teaching or assessments, providing screening for conditions, to giving advice on the funding options available for disability-related support at Imperial. The DDO (Dr Charlotte Sutherland) will facilitate your support within the Department, based on recommendations from DAS.

Disclosing a Disability

If you have a learning difficulty or enduring health condition, you should inform the department and the College so that reasonable adjustments can be made in order to reduce barriers to studying. You can find more information [on how to disclose your disability or health condition](#) on the Imperial website.

You can choose to disclose a disability at any point on your course but the sooner you do it, the sooner adjustments can be put in place to help you ensure that you achieve the same academic potential as other students.



Extra Time

You can find more information about [extra time and how to apply for it](#) on the Imperial website.

Some students have had extra time allowances in their school exams at GCSE and/or A level. This is often for reasons such as dyslexia, or because of another learning difficulty. Extra time in College examinations is **not granted automatically because you had extra time at school**.

The first exam in Year 1 is within the first couple of weeks after the Christmas holidays so it is important to apply as early as possible. Special exam arrangements are made by the DDO, based on DAS reviewing your documentation. Note that applications should be made **at least six weeks** before your first exam.

To apply, a **Full Diagnostic Assessment** is required and this must have been undertaken by either a Chartered Psychologist or a Specialist Teacher holding a current Practising Certificate in SpLD. The report must have been completed **after the applicant was sixteen years of age and be no more than ten years old**. Many students arrive at College with doctor's reports that are too old or which have not been carried out by an appropriately qualified person. If the report does not meet the criteria, then a new assessment is required. This is normally done with the assistance of the Disability Advisory Service but this will take time so it is important to start the process as early as possible.

If you wish to discuss your disability or supporting documentation, please [email Disability Advisory Service](#) to arrange an appointment or contact your DDO.

Further information for International Students

The international office has created a short arrival guide which will help you orientate during your first few weeks at Imperial College. There is also a great [website for new international students](#) with lots of information about services available to help get the most out of your time at Imperial.



Each year, the International Student Support team organises a welcome event for all new international students. You can find the time and date for the event on the [Welcome Season Website](#) or the [Welcome to Imperial App](#). You will be officially welcomed by key members of staff at the College. There will also be the opportunity to hear from an international alumnus about their experience of being a student at Imperial.

Travelling to Imperial

Public transport links in London are very convenient, and there are several ways you could get to the Imperial campus.

Train

There are regular trains from Heathrow, Stansted, Gatwick, and Luton airports into Paddington, Liverpool Street, Victoria and St Pancras Stations respectively, and the wait between trains is usually 15-30 minutes.

The South Kensington campus is on the Circle, District and Piccadilly lines. Liverpool Street is on the Elizabeth line and Circle line. Victoria is also on the circle line as well as the District line. St Pancras and Heathrow are both on the Piccadilly line, which means that there is a direct line from the airports to Imperial — a good thing when you have lots of bags! You can find more information on the [TFL \(Travel for London\) website](#).

If you feel that you have more bags than you can handle, you may prefer to book a taxi. It will be more expensive than public transport. You can find more [information about Taxis](#) on the TFL website.

Info Bite

Oyster cards (a stored value travel card) can be purchased from all tube stations. You can also use contactless credit or debit cards, apple pay and google pay on the tube and bus networks.

General Information

Campus Facilities

Library

[The Central Library](#) is open 24/7 except for maintenance on Friday nights. Each of its five floors has a designated noise level to help everyone find their best working space, with an extensive catalogue of material that supports taught courses as well as research. Some students may prefer to work in groups, so group study rooms are also available.

Ethos sport facilities

During the 2012 Olympics, the Japanese and Swiss teams used our facilities, which range from a gym and pool to badminton courts and a climbing wall. The four-storey sports centre on Prince's Gardens also offers fitness classes and therapy sessions. Students have free use of the gym and pool and discounted fees when booking courts. You can find more information about [Ethos sports centre](#) online.

Catering outlets

Working brains need food. Commercial Services has a range of eateries around South Kensington from cafés (including one in Chemistry) to a bar/restaurant in Eastside halls of residence. A wide variety of food and drink is available, from sushi and vitamin water to jacket potatoes to pies and salad. You can also get the student price for food – just flash your CID card for a discount!

Bursaries and Scholarships

Some students may be eligible for financial aid in the form of a bursary, which are typically means-based. Scholarships are also available to home and international students, and more [information about Bursaries and Scholarships](#) can be found online.

Student Hub

[The Student Hub](#) (Level 3, Sherfield Building, South Kensington Campus) and is a comprehensive information service run by knowledgeable staff who can answer your questions about university services.

During arrivals weekend, the Hub will be open between 9AM and 5PM to answer all queries and take payment of fees.

Your first encounter with the Hub will probably be paying your tuition fees. The [different ways of submitting payment](#) can be found online.

The Hub can also provide important documents such as bank letters, transcripts and statements of attendance, which can be used as supporting evidence when opening a bank account or applying for travel visas. As the first weeks of term are some of the busiest, it is highly advisable to pre-order the documents you need. The Hub will be central throughout your degree, later providing information about finances, accommodation and even research opportunities.

You can [contact the Student hub via email](#)

Info Bite

Make an electronic signature for your email account, which includes your CID number, year and degree programme. That way the recipient knows exactly who they are addressing.



Welcome Week timetable

Below is the initial Welcome Week timetable for 2022. Please note this may still be subject to change. You will receive your personalised timetable closer to the time, you will see further details (for e.g. room numbers) on that document.

Please note Year Abroad course students will receive additional communication from the CLCC ([Centre for Languages, Culture and Communication](#)) closer to the time.

	Group 1	Group 2
	Monday	
09:00	Student folder collection (South Kensington)	
10:00	Welcome to Department and meet Key Staff (South Kensington) Library Talk (South Kensington)	ChemSoc presentation and tour (South Kensington)
11:00	ChemSoc presentation and tour (South Kensington)	Welcome to Department and meet Key Staff (South Kensington) Library Talk (South Kensington)
12:00	ChemSoc family lunch / Social Year 1 Lunch (South Kensington)	Ancillary Talk (South Kensington)
13:00	Ancillary Talk (South Kensington)	ChemSoc family lunch / Social Year 1 Lunch (South Kensington)
14:00	College Welcome Talks (South Kensington)	
15:00	Tuesday	
09:00		
10:00		
11:00	Freshers Fair (South Kensington)	
12:00	Freshers Fair (South Kensington)	
13:00	Coffee drop-in (South Kensington)	
14:00	Freshers Fair (South Kensington)	
15:00	Freshers Fair (South Kensington)	
16:00	Wednesday	
09:00	Blackboard Treasure Hunt (online)	
10:00	Blackboard Treasure Hunt (online)	
11:00		
12:00	Language for Science meeting (only for Language for Science course students)	
13:00	Coffee drop-in (South Kensington)	
14:00	Thursday	
09:00		
10:00		
11:00	Head of Department Talk (White City)	
12:00	Meet your personal tutor event (South Kensington)	
13:00	Meet your personal tutor event (South Kensington)	
14:00	Meet your personal tutor event (South Kensington)	
15:00	Meet your personal tutor event (South Kensington)	
16:00	Friday	
09:00	Intro to Practical Chemistry 1 (South Kensington)	Team Building Activity (South Kensington)
10:00	Intro to Practical Chemistry 1 (South Kensington)	Team Building Activity (South Kensington)
11:00	Team Building Activity (South Kensington)	Intro to Practical Chemistry 1 (South Kensington)
12:00		

Frequently asked Questions— Who do I go to for help if?

With so many support services, it can be difficult to identify who best to consult, but the list below should help you to find help. In most cases, your personal tutor can help you identify support, but in other cases it is possible to find support directly yourself. Whilst your personal tutor is listed as the first person to discuss things with, you are of course free to discuss your needs with any staff member with whom you feel most happy to do so.

I have an issue with a Computer / IT issue (related to campus systems or related software)?

The ICT Helpdesk on Level 4 Sherfield can help with most issues. You can find more information on [the ICT website](#). Problems can also be [logged online](#).

I would like to receive further language support?

Your personal tutor can help you identify any concerns with your language skills, and may refer you to [the Centre for Academic English](#). You may also sign up to courses they run without referral from your personal tutor.

I would like to receive further Disability Support?

You are encouraged to [contact the Department Disability Officer](#) (Dr Charlotte Sutherland) who will work with the College's [Disability Advisory Service](#), to help identify your support needs. Depending on your needs, funding may be available.

I would like to receive support for my Specific Learning Difficulties?

You may already have identified SpLDs or discussion with your personal tutor may suggest support might be useful. You or your personal tutor can contact the Department Disability Officer ([Dr Charlotte Sutherland](#)) who can work with you and the Disability Advice Service to identify your needs and provide screening or support where suitable.

I have health issues that are interfering with studies (physical or mental)?

You should alert your Personal Tutor as soon as you can; this will be discussed with the Senior Tutor to help assess the likely impact on your studies. All students should make sure that they are registered with a Doctor either at the Campus Health Centre (if living in campus accommodation/in the catchment area) or near their home. Contact the Health Centre via [the Health Centre website](#) and phone: 020 7584 6301. There is also a Dental Clinic on campus—call 020 7589 6623 for information.

I have been, or plan to be, absent from college?

If you are absent for one or two days, you can self-certify your absence. For three or more days you must inform your Personal Tutor, and for more than a week you must [contact Amelia Barron](#) to inform her about your absence. Where this interferes with assessment you must complete the appropriate Mitigating Circumstances form. You can request this form from Amelia.

I have financial troubles?

Your Personal Tutor can help you identify sources of funding and can direct you to [Student Financial Support office](#) for assistance. There are hardship grants and hardship loans available depending on your circumstances. The Senior Tutor can also help direct you appropriately, particularly if issues are severe.

Frequently asked Questions— Who do I go to for help if?

I have an issue with my accommodation?

Your personal tutor can discuss issues with you to help you find avenues of support and refer you to the Accommodation Office. The [Senior Tutor](#) can also help identify the likely affect on your work.

I am experiencing social problems?

Who to approach: Your Personal Tutor can discuss your concerns, as well as the [Senior Tutor](#), and both can help you to find possible solutions.

I have troubles at home/with my family?

Your Personal Tutor can discuss your concerns with you, as well as the [Senior Tutor](#). If the issues are likely to interfere with your work, the [Senior Tutor](#) can help to identify possible routes of support.

I am finding university life stressful?

Your Personal Tutor can discuss your concerns, as well as the [Senior Tutor](#), and both can help you to find possible solutions. In some circumstances we may direct you to the [Student Counselling Service](#) for support, however we cannot make a referral to this – you must make your own appointment when you are ready to discuss with a counsellor. You can [contact the Counselling service](#) via email if you have any questions.

I am struggling with my study skills (exams, lectures, writing reports)?

Your Personal Tutor can help you identify your needs and can work with you to improve your study skills. They will make use of [the Imperial Study Guide](#) to help you identify how best to improve your study skills.

I have concerns about the course?

If there are any concerns with your course of study, be it content, difficulty or structure of deadlines and/or workload, the Head of Pastoral Care and the Student Experience ([Amelia Barron](#)) is happy to discuss these with you. There are regular ‘focus group’ meetings (with lunch provided) to which you are encouraged to attend to discuss these issues, as well as your Student Reps and Departmental Representative, Xinran Li (you can [contact Xinran](#) via email).

I need a reference?

You should always ask your personal tutor for a reference, and include an up-to-date CV together with the description of the position for which you are applying (preferably the advertisement). A secondary reference can be requested from the Head of Pastoral Care and the Student Experience or Director of Undergraduate Studies if necessary.

Finally. as a reminder: if in doubt, ask!

We are here to help but can only do so if you let us know what you need help with