

***Department of Chemistry***

*Postgraduate (PhD) Research Student Handbook*

2022-2023



***for commitment to advancing women's careers in Science***

The Department of Chemistry has become one of only four university Departments across the UK and the first at Imperial to win an Athena SWAN Gold Award. Read the full article on our website at:

<https://www.imperial.ac.uk/chemistry/about/equality-diversity-inclusion/athena-gold/>

## Introduction

Every student for a higher degree is required to pursue a regular course of study; the length of the course is prescribed for each student by the College in accordance with the University regulations.

Within nine months of the initial start of the PhD, candidates must undertake an assessment on their work. If they do not perform satisfactorily at this stage, then their registration may be changed to MPhil, and the duration of the degree likewise shortened. PhD experimental studies are normally expected to last 36 months from the initial date of registration.

## Supervision

The primary responsibility for supervision of your postgraduate studies lies with your supervisor. Your supervisor is responsible for overseeing your progress during your studies, ensuring that you undertake appropriate training courses, follow safety guidelines and making funds available for you to successfully undertake your studies. Further supervision may also be provided by one or more co-supervisors - typically where your research involves collaboration with another research group, or where your primary supervisor is a new member of academic staff.

<https://www.imperial.ac.uk/students/success-guide/pgr/effective-research/working-with-your-supervisor/>

## Departmental Support

Administrative support for postgraduate training is provided by the Postgraduate Administrator, Ms Doris Pappoe (G21, MSRH). She should be able to help with most practical matters concerning the administration of your studies, including the submission of relevant forms and the payments of bursaries. Working alongside the postgraduate administrator is the Research Student Manager, Dr Mike Ray (G21, MSRH) whose role is to support all research students in the MSRH building as well as managing the transition of students between postgraduate programmes. To contact Doris and Mike, please use the following address: [chemphd@imperial.ac.uk](mailto:chemphd@imperial.ac.uk). Using this address avoids your query sitting in the inbox of the personal e-mail address of Mike or Doris when they are on leave and will ensure a faster response to your message.

Academic oversight of postgraduate training is provided by Professor James Wilton-Ely (Dr Rudiger Woscholski from January 2023), the Director of Postgraduate Studies (DPS). Please contact the DPS if you have any general queries about the PhD programme or the training it provides. If you have any other concerns, including any concerns you may have about the supervision of your studies, please contact the Postgraduate Tutors:

Dr Rob Davies (Room 601J, MSRH, [r.davies@imperial.ac.uk](mailto:r.davies@imperial.ac.uk))

Professor Keith Willison (Room 301A, MSRH [keith.willison@imperial.ac.uk](mailto:keith.willison@imperial.ac.uk))

Dr Silvia Díez-González, (Room 401E, MSRH, [s.diez-gonzalez@imperial.ac.uk](mailto:s.diez-gonzalez@imperial.ac.uk))

The members of the Chemistry PhD Student Support Team are listed on the website at the following link: [https://www.imperial.ac.uk/chemistry/postgraduate/phd/pastoral-support/with\\_details\\_of\\_their\\_roles](https://www.imperial.ac.uk/chemistry/postgraduate/phd/pastoral-support/with_details_of_their_roles)

## Personal Advice

The Postgraduate Tutors, Dr Rob Davies, Prof. Keith Willison and Dr Silvia Díez-González can provide more information on all services available, in confidence. They are available for consultation by all postgraduate students.

The College has an extensive range of services to provide personal advice to students and staff. This includes the Health Centre in the Southside section of Prince's Gardens, Counselling services and Faculty Tutors. These can be found on the very useful **Student Support Zone** site (<http://www.imperial.ac.uk/student-space/>).

### **Induction and Safety**

The Department, in conjunction with the Graduate School runs induction activities for all new PhD students in October each year. These include a compulsory Safety Lecture, which details the Department's requirements for safe practice in your research. The link to the Graduate School Induction is:

<https://www.imperial.ac.uk/students/academic-support/graduate-school/students/welcome-and-induction/>

Details of this induction programme will be given to you by the PG Administrator, Doris Pappoe. If you start your studies at a different time in the academic year, please discuss your induction with Doris Pappoe and your supervisor, and ensure that you have completed the online Safety courses at the first available opportunity. The link to the Departmental Safety page and courses is [New Postgraduates \(sharepoint.com\)](#)

You should be aware that you are responsible for ensuring that you undertake your research in accordance with safety regulations and procedures, as agreed with your supervisor. If you have any doubts about any safety aspects of your work or work environment, you should discuss these with your supervisor.

### **Themes and Theme Cohorts**

The research in the Department falls under a group of Research Themes (<https://www.imperial.ac.uk/chemistry/research/research-themes/>), which are listed below:

- Synthesis and Catalysis
- Chemical Biology and Healthcare
- Environmental and Green Chemistry
- Energy
- Imaging, Sensing and Analytical Chemistry
- Materials and Molecular design
- Theoretical, Computational and Data-driven Chemistry

All PhD students have been assigned to a Theme based on the topic of their research and this will be used to plan the PG Symposium, in which each Theme has its own parallel session. PhD students are encouraged to take part in the activities being organised by the Theme Coordinators and to suggest new events (please contact the relevant Theme Coordinator). The Themes also provide the students with a relevant research community to which they can belong (if they wish) beyond their research group. Events will be organised by and on behalf of these 'Theme Cohorts'. Participation will be on a voluntary basis and students can engage as much as they wish. It is clear that many students will be engaged in research that straddles more than one theme and students are encouraged to attend events organised by any Theme.?

### **Research Seminars**

The following link, should contain all research seminars in the Department (and elsewhere in the Faculty and in College):

<https://www.imperial.ac.uk/chemistry/news-and-events/events/>

PhD students are expected to attend at least 4 research seminars (from any Theme) and to list these seminars at the end of their ESA and LSR reports and in the documentation for the Final Year Chat.

There are also many other useful and informative presentations that will be advertised throughout the year, for example, workshops organised by one of the learned societies (e.g. RSC or SCI) or lectures in other Departments. There may also be useful and relevant online courses that your supervisor can recommend. Please discuss your training needs and how to address them with your supervisors.

### **English Language Assessment and Classes**

All students whose native language is not English are required to attend English Language classes and to be assessed in the first year. Please contact the Centre for Academic English (CfAE) for initial assessment or exemption: <https://www.imperial.ac.uk/academic-english>

### **Centre for Academic English Welcome MS Team**

Through the MS Team, students will be able to post questions at any point or talk to a member of the Centre directly. This Team will also house information and video clips explaining how the CfAE can help you throughout your time at Imperial.

The Induction video can be access at:

[MS Stream link to the Centre for Academic English welcome video](#)

### **Graduate School Professional Skills Development Courses**

The Graduate School's Professional Development attendance requirement exists in order to ensure that all students receive some professional development training while at Imperial and have the opportunity to engage with the programme, alongside their research work.

The College requires all doctoral students to achieve a minimum of four Graduate School credits, by the Late Stage Review (LSR). In addition to these credits, the [mandatory Plagiarism Awareness Online Course](#) is compulsory and should be completed by the ESA but does NOT count towards the minimum attendance requirement. The online doctoral plagiarism awareness course must be completed by the Early Stage Assessment (ESA), Credits should be accumulated as follows:

- By the [Early Stage Assessment \(ESA\)](#): 2 credits + [mandatory Plagiarism Awareness Online Course](#).
- By the [Late Stage Review \(LSR\)](#): 2 further credits

Full details can be found of the requirements is at:

<https://www.imperial.ac.uk/students/academic-support/graduate-school/students/doctoral/>

Students are responsible for choosing the dates of the courses they wish to attend and completing the required booking process in consultation with their supervisor. All students are responsible for informing their supervisors which courses they will be attending and the dates. You are required to take the required courses approved by Graduate School by the Early Stage Assessment milestone, carried out 9 months after starting the PhD programme. **Please note that these courses run from October to June.**

The Graduate School new booking system Inkpath, is now up and running:

<https://www.imperial.ac.uk/students/academic-support/graduate-school/students/inkpath-guidance/>

## **Demonstrating**

Undergraduate teaching is a valuable part of your PhD training, and all PhD students will have the opportunity to contribute to teaching duties which, in turn, can help PhD students obtain status as an Associate Fellow of the Higher Education Academy. All work is paid at the standard College rates, and teaching allocations are distributed by Dr Laura Patel, the Academic Laboratory Coordinator (demonstrating). Participation in all demonstrating should be agreed with your primary supervisor.

## **Supporting and assisting BSc/MSci/MRes students**

PhD students are often asked to look after a BSc/MSci or MRes student during their research project. This usually involves some training in techniques and practical advice as the project develops. In addition to it being good for the CV, we also know that PhD students enjoy the opportunity to pass on the advice and support they received from other PhD students earlier in their studies to a new generation of students. We also know of many occasions where BSc/MSci/MRes students produce work that is then published with the PhD student who supported them as co-author. However, it is important to point out that the PhD student is not 'supervising' the BSc/MSci/MRes student or responsible for the success of the student's project – this is the responsibility of the Group Leader.

## **Satisfactory Progress in Research activities**

Students will be assessed within the Department at a number of points throughout their degree.

- a) Via six-monthly progress reports (online)
- b) Via ESA examination after 9 months
- c) Via LSR examination after 18 months (including a plan for the remainder of the PhD)
- d) Via presentation of a seminar on their work at 33 months

## **Six-monthly progress reports**

Students are required to complete six-monthly progress report forms online (the link will be circulated by e-mail). The first part of this process is carried out in consultation with their primary supervisor and the online form should be filled out together. Both student and supervisor should provide comments on how the research programme is proceeding and any issues that have arisen. The questions asked vary with the stage of the student's PhD studies. In addition, there is an online form completed by the PhD student alone, which can be used to highlight any issues in confidence. This form will be reviewed by the PhD Support Team and will be passed on to the Director of Postgraduate Studies after consultation with the student if appropriate.

## **Early Stage Assessment (ESA) at 9 months (**

It is not always possible to predict an individual's capacity for research on the evidence of previous academic performance. A PhD programme at the College will include an assessment of research ability based on performance after the initial 9 months of the PhD programme. If the student is not performing at a suitably high enough level, which suggests that they may not succeed in their PhD, then there is the option of altering their degree from PhD to MPhil, and the early termination of the work. Such a decision will be made after discussions with the student and between the supervisor and the Director of Postgraduate Studies (DPS).

All students will be required to submit an Early Stage Assessment Report in the style of a scientific paper before discussing their work in an oral viva. A suggested template for the ESA Report is on **page 19** in this Handbook, but any appropriate template (for example from an RSC journal) would be suitable. Students wishing not to use the template should obtain explicit permission from the independent assessor. This ESA Report will be assessed by one other academic (who is independent and not involved in the student's project), who will also check for plagiarism. The student will upload the ESA Report to Turnitin on Blackboard and then send the Report and the

Supporting Information (see page 19) to the Academic assessor at least a week beforehand. The work is then assessed in an oral viva. The ESA Report and viva should normally be completed **by nine months from the date of initial registration**. The documentation on the viva and ESA Report is filled in online by the Assessor and passed on to the supervisor stating whether the Assessor believes that the student understands the project and is fit to continue. The student should see this report and view the comments on their work and performance to help them improve. This documentation is reviewed by the DPS and signed off.

The details of what you should include in the Early Stage Assessment report should be agreed in advance with your supervisor. It is not expected that the report will include a large body of novel results. For most PhD students, much of the first year of their studies is spent gaining experience in their research field, familiarising themselves with the literature and gaining experience in the relevant experimental and/or theoretical techniques. The purpose of the examination is to confirm that the student:

- (a) understands the research problem
- (b) is aware of the associated literature
- (c) has demonstrated the ability to conduct the research
- (d) has a realistic research plan and schedule
- (e) has the required ability for PhD studies

*Students who started their postgraduate research degree on or after the 28 September 2019 will need to follow the College's policy on using Turnitin as part of the Early Stage Assessment and Thesis submission process. Students who started their postgraduate research degrees prior to this date should follow the Departmental policy on submission requirements and any measures and guidance they may have in place on good academic practice.*

### **Assessment at 18 months (Late Stage Review, LSR)**

After 18 months on the PhD Programme (or as close to this as possible if the student does not start in October), students are required to complete a Late Stage Review (LSR). Supervisors will be asked to identify **two** independent assessors to conduct the review. At least one assessor should be a member of academic staff in the Department of Chemistry, however, the second assessor can be from another Department, if this is appropriate for the topic of the project. The assessors will schedule a time to meet with the student and conduct the LSR. It is usual for the student to use the poster they plan to present at the PG Symposium (see below) as a summary of their work to date. In addition the student must provide a workplan for the rest of their PhD studies. After the meeting, the assessors and supervisor will complete the LSR form online. The student should see this report and view the comments on their work and performance to help them improve.

The primary role of the LSR is to assess the current scientific achievement of the student and their research plan for the final phase of their studies. A secondary, but important role is for the student to receive independent scientific input into their project. As mentioned above, the poster for the PG Symposium can be used as the basis for the independent LSR discussion. However, the student/assessor/supervisor are free to supplement the poster with slides, or inspection of key spectra/data, in order to allow for a thorough review/discussion.

Any students who fail to meet the standard expected at the LSR will require remedial action. If the quality of the work is unsatisfactory and suggests that the student may not succeed in their PhD studies, then there is the option of transferring their degree registration from PhD to MPhil and terminate their work early. Such a decision will be made by the Director of Postgraduate Studies in consultation with the supervisor after discussion with the student.

### **Presentation of a seminar on their work at 33 months**

After 33 months on the PhD Programme (or as close to this as possible if the student does not start in October), the student is required to present a seminar on their work, most commonly at the PG Symposium (see below). They will present the seminar at a Departmental session and answer questions on their work to members of staff, students and external visitors. Any seminar which is deemed to be unsatisfactory may require further assessment to make sure the student is on track to complete their PhD.

### **Student Complaints and Appeals**

Imperial College aims to give the highest specialised instruction and support to all its students, however, in some cases it recognises that students may not always be satisfied with aspects of the training and support that they have received. If you wish to raise a concern, you should first seek advice from your PhD Student Representatives (there is one for each PhD year group) and raise the matter with the PhD Student Support Team (Doris Pappoe and Mike Ray, [chemphd@imperial.ac.uk](mailto:chemphd@imperial.ac.uk)). If you are not satisfied with the outcome, you should consult the College's Registry website which provides clear and consistent procedures that indicate how you can take your comments further.

### **Postgraduate Symposium**

The Department runs a Postgraduate Symposium in July each year. This is a high-profile event, attracting industrial sponsorship and attendance. It is a showcase of PhD student achievements in the Department. **All second year students are required to give poster presentations** on their progress to date at the Symposium. **All third year PhD students in the Department are required to give oral presentations on their research studies**, organised in parallel sessions. Presentation at the PG Symposium is part of the progress assessment for Research students. Industrial and Departmental funded prizes are awarded for the best presentations. **The next PG Symposium will be on Friday 7th July 2023.**

### **Study Leave**

It is possible that students' research will require the collection or study of material away from College. The student's supervisor will need to apply for study leave normally at least one month in advance. A student who is granted permission for study leave must have been in regular attendance at College for a minimum total of twelve months full-time study (or the equivalent in part-time study). Apart from in exceptional circumstances, a student shall not be absent during the first three months or the last three months of the course. Where study leave is approved for a student to work abroad and if the period of study leave is three months or more in a particular session, a lower rate of tuition fee may be applicable. For further information on external study leave, please refer to the [guidelines for external study leave](#).

### **Holidays**

Students should always agree their holiday arrangements with their supervisor in advance. In accordance with the rules laid down by the Research Councils, no more than eight weeks, including public holidays, may be taken in each year.

### **Sickness**

Where students are unable to attend College because of illness or urgent personal circumstances they should inform their supervisor and, if required, the PG Tutor as soon as practicable. College regulations require that, if the absence is due to illness, a medical certificate must be provided after seven days. If the absence is prolonged, normally for four weeks or longer, it will be necessary to request an Interruption of Studies.

## **Interruption of Studies**

It may happen that a personal emergency or other circumstance arises which necessitates a student to take a break from their studies. As soon as possible, students in such situations should, in consultation with their supervisor, involve the PG Tutor (Dr Rob Davies) or Deputy PG Tutors (Prof. Keith Willison and Dr Silvia Díez-González) or the PhD Student Support Team, who can advise further. If deemed appropriate, an application will be made by PhD Student Support Team and the DPS to the College for an interruption of studies. This permits students to interrupt their studies for a period of time (up to a maximum of two years, and normally not less than one month). No fees are payable for this period, during which the research registration is effectively suspended:

<https://www.imperial.ac.uk/students/success-guide/pgt/getting-started/breaks-in-study/>

Please note that retrospective applications for interruption of studies are discouraged and may not be granted. Therefore, it is very important that students and/or supervisors inform the PhD Student Support Team and/or PG Tutor as soon as they are aware of a situation that may require an interruption.

## **Student Support Fund**

The College has a fund to help students who are experiencing financial hardship. The Student Support Fund is primarily intended to assist those students who experienced a change in their financial circumstances after registering with the College. Grants cannot be made to assist with tuition fee payment. The PG Tutor or supervisor of each student will be asked to confirm satisfactory attendance and academic progress. Applications are considered by a panel that will meet once per term (<https://www.imperial.ac.uk/students/fees-and-funding/financial-assistance/student-support-fund/>). The Faculty of Natural Sciences has The Dean Fund which is used to support students across the Faculty. Nominations for awards for individual students may be made by Heads of Department / Directors of Undergraduate / Postgraduate Studies using the online application form at the following link:

<https://imperiallondon.sharepoint.com/sites/fons/faculty/education/DeansFund/SitePages/Home.aspx>. Students cannot apply directly to the Student Support Fund, but must do so via their Department.

## **Progress Review (3<sup>rd</sup> Year Chat)**

Research students yet to submit their thesis for examination by the end of the standard active research period are subject to a formal monitoring point to determine progress in advance of entering the writing up period. This formal monitoring point is known by College as a Progress Review but we prefer to refer to this as a 3<sup>rd</sup> Year Chat, as it is an opportunity for us to find out how we can help you in the final stages of your PhD. Around 32-34 months after starting your PhD, a senior member of staff (HoD, DPS, PG Senior Tutor etc.) will get in touch to arrange the chat.

As part of this process, students should explain how they plan to ensure that all experimental work and collection of material relating to their thesis will be complete within the standard active research period allocated for their programme of study. Ahead of the meeting, the PhD student should submit a timetable of remaining work, which has been agreed with their main supervisor. The Senior Academic will then confirm that the Progress Review milestone has been completed.

## **Application for Entry to Writing up Status (WuS)**

To be considered eligible for entry to writing up status, students must have successfully completed the progression milestone requirements; Early-stage Assessment and Late-Stage Review. Students must have completed all experimental work and collection of material relating to their thesis and be in a position to submit their thesis within their writing up period. The length of the writing up period is



subject to the College's regulations with respect to maximum thesis submission deadlines (48 months from the start of your studies). The writing up period will terminate at the thesis submission deadline if this is earlier than the maximum writing up period.

Students in the writing up period will remain enrolled on their registered programme of study and must continue to re-enrol as required by the College until submission of the thesis for examination. Failure to re-enrol as required by the College may result in withdrawal from the programme.

Students who still have experimental work to perform cannot move into writing up and should continue their registration at the full rate of fees.

**Students are expected to submit within 4 years of the start of their PhD studies.** This period can be extended in the case of exceptional events, such as disruptions due to a global pandemic.

**The completed WuS form and the timetable of remaining work for writing up the thesis should be sent to the PG Administrator, Doris Pappoe ([chemphd@imperial.ac.uk](mailto:chemphd@imperial.ac.uk)).**

Further information on the topics above can be found at:

[www.imperial.ac.uk/registry/researchdegrees](http://www.imperial.ac.uk/registry/researchdegrees)

### **Bursary extensions**

It is strongly recommended that you aim to complete your studies, including the submission of your PhD thesis within the time period of your funding and in discussion with your supervisor. Most PhD funding is for 3.5 years and this allows for 6 months to write up your thesis and should not be considered additional time in the laboratory. For students who are part of a Centre for Doctoral Training (CDT), the total course is 4 years with the MRes year provided the training and experience of the research area that students on a standard 3.5 year programme would gain in the first 6 months. As a result, CDT students should aim to start writing up their thesis before the end of the third year of their PhD studies.

If you are concerned that you need additional time and / or financial support to complete your PhD, you should discuss this with your supervisor. The Department does not routinely support extensions to PhD bursaries but it will support all students to finish their studies and this support can take many different forms. In case of significant financial hardship during your studies, it may be possible to obtain support from the Imperial College **Student Support Fund** (<https://www.imperial.ac.uk/students/fees-and-funding/financial-assistance/student-support-fund/>).

### **Research Integrity**

Research integrity is extremely important. It really matters how you conduct research, how you present the findings of your research and how your research impacts on society and the wider world. At Imperial College, you will work with internationally renowned academic staff who will help you to design rigorous, robust, and reproducible research methods. This will ensure that your research is ethical and lawful and that any adverse impact your research may have on society, natural environment, or animals is justified and minimised. Research integrity also involves presenting the findings of your research in a responsible manner.

The College has adopted the *Council for Science and Technology's Universal Ethical Code for Scientists* and upholds its three principles, which are:

- Rigour, honesty and integrity
- Respect for life, the law and the public good
- Responsible communications: Listening and informing

**The primary way to ensure research integrity is to promote and maintain a culture of honesty, openness and responsibility.** To this end, the Graduate School has designed a series of professional development courses for postgraduate students:

**Plagiarism Awareness.** This is **mandatory** for both Master's and Doctoral students. This online course was developed by the Graduate School, in conjunction with the Library. It aims to equip you with a working knowledge of the concept of plagiarism and how to avoid it. It also aims to provide you with information to enable you to use and share information ethically, with academic integrity and in accordance with Imperial College's Examination & Assessment: Academic Integrity Policy.

**Copyright for Researchers (Doctoral).** This course aims to equip you with a working knowledge of copyright and licencing so that in your career you can use and share information in a copyright safe way. The course has activities and discussions to give you the opportunity to practice the knowledge and skills acquired through context-based scenarios and examples. You are recommended to share your reflections on the digital canvases throughout the course. This will give you a chance to elaborate what you have learnt in the readings, share examples and challenge your understanding by interacting with your peers.

**Intellectual Property (Doctoral).** This course aims to equip you with a working knowledge of the concept of Intellectual Property (IP), and an awareness and understanding of the basic principles surrounding IP rights, such as patents, copyright, design rights and other forms of IP. An understanding of IP and its application is important for all students; for those intending to continue in academia as well as those intending to enter the commercial world after graduation.

**Introduction to Making your Thesis Open Access (Doctoral).** This workshop will provide a general introduction to open access, with specific reference to the PhD thesis, and related research outputs that may arise from PhD study. You will be introduced to: open access repositories, open access publishing and online support tools such as the Directory of Open Access Journals and Open access button. You will also be provided with the opportunity to discuss Creative Commons licences, the re-use of third-party copyright materials in your thesis and why your thesis is made open access.

**Data Management (Doctoral).** Data is a key research asset, underpinning almost all published research conclusions. In recent years, new technology has enabled us to:

- Generate and record far more data than ever before; and
- Share, reuse and combine that data in new ways to generate new insights.

Research data is increasingly a first-class research output, and a little bit of planning will enable you to take advantage of this shift. This course will highlight key considerations and help you to assess when it is appropriate to share your data and how to write a data management plan.

This workshop is supported by a webinar on Research Data Management Plans which covers some of the more practical elements of research data management and will help students to create their own data management plans.

**Science, Research and Integrity (Doctoral).** This workshop is designed to give you a chance to explore and critically analyse the ethics of scientific research in a constructive way. The structure and implications of specific cases of scientific fraud will be discussed critically and the course will also look at different moral theories and how they might apply not only to specific moral dilemmas, but also to science in general. The session will aim to forearm you by providing a safe environment

within which to formulate and articulate your own views on how you might deal with the sorts of dilemmas you are likely to face during your career.

### **The San Francisco Declaration on Research Assessment (DORA)**

The College has signed the San Francisco Declaration on Research Assessment (DORA). The ethos behind DORA is to improve the ways in which the output of scientific research is evaluated by funding agencies, academic institutions, and other parties. The outputs from scientific research are many and varied, including: research articles reporting new knowledge, data, reagents, and software; intellectual property; and highly trained young scientists. Funding agencies, institutions that employ scientists, and scientists themselves, all have a desire, and need, to assess the quality and impact of scientific outputs. It is thus imperative that scientific output is measured accurately and evaluated wisely.

As such the College has signalled that it will assess research based on quality rather than where it is published, for example journal impact factor. The Graduate School promotes the ethos behind DORA at all its professional development workshops.

### **Plagiarism**

Students are reminded that their thesis must be their own work and all quotations from other sources, whether published or unpublished, must be properly acknowledged. Plagiarism is a very serious offence and, where proven against a student may result in disqualification from the examination for the PhD and exclusion from all future examinations of the College. Some joint work is permitted, provided it is properly and carefully acknowledged as such. The College regulations in respect of plagiarism can be found at <https://www.imperial.ac.uk/admin-services/library/research-support/plagiarism-awareness-for-researchers/>. The College uses the TurnitinUK Plagiarism Detection Service: <https://www.imperial.ac.uk/admin-services/ict/self-service/teaching-learning/turnitin/turnitin-for-students/>

### **Guidance on Avoiding Self-Plagiarism in Chemistry PhD Theses**

The following provides some general guidance on avoiding self-plagiarism when writing your examined chemistry PhD thesis. Any specific concerns you may have regarding self-plagiarism should always be discussed with your supervisor. This guidance only applies to chemistry as conventions differ between subject disciplines.

Your **Examined Thesis** is the version of your thesis that is examined and assessed and it will be submitted to **Turnitin** for plagiarism checking. This will pick up any similarities from your own papers (or those by others). In the course of writing your thesis, you may potentially re-use figures or text that you created and published in a paper. It is important to note that as long as you formally acknowledge the original paper through citing and referencing, just as you would for a paper published by someone else, you will *not* commit self-plagiarism. Below is some more specific guidance relevant to your subject discipline.

The **re-use of figures** from published work is fine as long as you acknowledge the paper where the figure was originally published.

The **re-use of text** from your own published paper in your thesis is a grey area and you should seek advice from your supervisor. Most papers have multiple authors and it is likely that the text in a paper will involve contributions from multiple authors, principally your supervisor. Since your PhD thesis is your own work, it is advisable to re-write the text from your paper to eliminate any concerns over plagiarism. It is recommended not to copy and paste text from your paper, even as a starting point. It is always best to read the paper and then close the file and write the description afresh in your own words (even if they are not as polished as in the paper).

A thesis has a different purpose from a published paper. A paper should be a concise summary whereas a thesis should logically and methodically walk you through the study. The presentation of negative, incomplete or confusing results is perfectly acceptable in a thesis as part of this 'story' but these aspects would be less likely to make the content of a paper. Chemistry papers are often collaborative with multiple authors so unpicking your individual contribution would probably take more time than rewriting. Sometimes review papers are used as the basis for the introduction to a thesis, however, the content must still be re-written.

You should always **clearly reference your own papers** where these have used concepts, data or material included in your thesis. This can be achieved by citing in the usual way, or by more overt acknowledgement of your paper/s at the beginning or end of chapters. For example: 'The data in this chapter was utilised to publish the following contributions...'

Many **CDT students** will have done an MRes degree as part of their studies. This is a separate degree and was awarded on the basis of various pieces of coursework, such as the *proposal* and the *dissertation*. If you re-use this text without changing it, this constitutes using the same text for two separate degree awards and so will count as self-plagiarism.

Your **Published Thesis** is the version of your thesis made available to the public via Spiral, Imperial College's institutional repository.

Although citing and referencing your own published work in your thesis ensures you will avoid self-plagiarism, you will potentially need to take further measures to comply with copyright law. If you have published your work in a journal or conference proceedings, it is likely that you will have had to assign copyright for your work to the publisher. Therefore, you will need to obtain permission from the copyright holder in order to make extracts, images or figures you have reproduced in your thesis publicly available in your published thesis. This is also the case for any figures you have reproduced from papers you have cited and referenced by other authors. More information is available here: <http://www.imperial.ac.uk/research-and-innovation/support-for-staff/scholarly-communication/open-access/theses/reproducing-published-works/>

The [Preparing your Thesis](#) pages on the College website has advice on:

- Seeking permission reproduce content for which you do not own the copyright
- Requesting an embargo
- Publishing your thesis
- Avoiding plagiarism

### **Exam Entry forms, Nomination of Examiners and Thesis Submission**

Students should note that they need to initiate the examination process well before they submit their theses for examination and the timing of this is very important. The student starts the process by completing the online Exam Entry Form through [MyImperial](#) **four months before you intend to submit your thesis**.

To enter for examination, candidates should refer to the Examination Entry milestone visible in the **Research Degree Milestones** tile in [MyImperial](#), where you will be asked to provide details relating to your research topic, thesis title and expected date of submission. Your main supervisor will then be asked to nominate examiners for your thesis, in accordance with the College's [Procedure for Appointment of Examiners for Research Degrees](#). The examination entry details and the examiner nominations will then be considered by the Director of Postgraduate Studies. Upon their approval,

the examination entry will be processed by the Registry Assessment Records Team and you will receive written notification via email once your entry to examination is confirmed. Please note that candidates must submit their thesis by the given deadline displayed via My Imperial, regardless of the status of the examination entry paperwork.

**Information on the Submission of Thesis:**

<https://www.imperial.ac.uk/students/success-guide/pgr/progression-and-feedback/thesis-submission-and-viva/>

**Study Spaces within the Department of Chemistry**

In addition to study spaces at the College's libraries, there are spaces within the Department of Chemistry, at the South Kensington and White City campuses (MSRH and Uren Buildings), which you can use for individual and group work. Students are not allowed to book rooms within the Department; however, you are welcome to use rooms when they are free. You can use the link below to check the availability of rooms on both campuses. The webpage also has links to floorplans at both buildings, with study rooms and spaces highlighted ([chemunity.imperial.ac.uk/chemical/](http://chemunity.imperial.ac.uk/chemical/)).

**Chemistry Department PG Social Events**

Post Graduate social events are organised by the PG Committee, a group of current PhD students charged with organising social events and facilitating interaction between members of the Department. Such events include doughnuts on Fridays, cocktail evenings, trips away etc. The committee is made up of voluntary members including a chairman, secretary and treasurer who are elected by the Chemistry PhD students each year.

**Students Standing for Sabbatical Posts**

Students are encouraged to take advantage of the social and sporting opportunities afforded by the Student Union. There are a number of sabbatical student positions that together run the Union each session. If you are considering standing for election to one of these positions then before allowing your name to go forward you are strongly recommended to discuss with your supervisor about the possible effect on your academic studies and where appropriate how best to prepare to resume your studies in the event that you are elected.

## The PhD Progression Timeline

<b>First Year PhD Students</b>		
<b>Nature of assignment</b>	<b>Action for the student</b>	<b>Deadline</b>
<b>Late Starters</b>	<p>Students who start their PhD later than the beginning of the academic session should contact the PG Tutor, Dr Rob Davies or the Deputy PG Tutors, Prof. Keith Willison or Silvia Díez-González who will explain the pastoral care available to them. Their contact details, along with those of the other members of the Chemistry Department PhD Support Team are listed at <a href="https://www.imperial.ac.uk/chemistry/postgraduate/phd/pastoral-support/">https://www.imperial.ac.uk/chemistry/postgraduate/phd/pastoral-support/</a></p> <p>The Welcome Talks have been uploaded on to Blackboard <a href="#">Chemistry PhD Student Information</a></p>	By the end of their second week.
<p><b>English Language Classes</b></p> <p>Non-native English speakers are required to attend classes to be assessed in the first year</p>	Contact the <a href="#">Centre for Academic English</a> , which has a <i>Centre for Academic English Welcome MS Team</i> . Through this MS Team, students will be able to post questions at any point or talk to a member of the Centre directly. This Team will also house information and video clips explaining how they can help you throughout your time at Imperial.	Students should reach the required standard of English by the Early Stage Assessment (ESA) after 9 months.
<p><b>Graduate School Professional Skills Development</b></p> <p>All research students are required to complete the Graduate School Professional Skills Development Programme as part of their PhD registration</p>	<p>The College requires all doctoral students to achieve a minimum of <b>four</b> Graduate School credits, by the Late Stage Review (LSR). In addition to these credits, the <a href="#">mandatory plagiarism course</a> is compulsory and should be completed by the ESA but does NOT count towards the minimum attendance requirement. Full details can be found at: <a href="https://www.imperial.ac.uk/students/academic-support/graduate-school/students/doctoral/professional-development/">https://www.imperial.ac.uk/students/academic-support/graduate-school/students/doctoral/professional-development/</a></p>	<p><b>Two</b> credits and the compulsory online Plagiarism Awareness course must be completed by the Early Stage Assessment (ESA), held after 9 months.</p> <p>A further <b>two</b> credits should be completed by the Late State Review</p>
<b>Complete Mid-Year Progress Report</b>	Six-monthly progress report form completed by the student and supervisor online and separate online form completed by the student alone.	Submit 6 months after starting (end of March for those who started in October)

<b>Early Stage Assessment (ESA)</b> after 9 months	All students will be required to submit a written report. The Template for the Report is on <b>page 19</b> . This report will be assessed by one other independent academic. The student will be assessed in an oral viva.	Submit ESA report to Blackboard by <b>end of June</b> . Completed ESA form to be submitted by <b>end of August</b>
<b>PG Symposium</b> on Friday 7 <sup>th</sup> July 2023	Attend PG Symposium	<b>All first year students are required to attend.</b>
Complete <b>End of Year Progress Report</b>	Six-monthly progress report form completed by the student and supervisor online and separate online form completed by the student alone.	Submit 12 months after starting (end of September for those who started in October)
<b>Second Year PhD Students</b>		
<b>Nature of assignment</b>	<b>Action for the student</b>	<b>Deadline</b>
Complete <b>Mid-Year Progress Report</b>	Six-monthly progress report form completed by the student and supervisor online and separate online form completed by the student alone.	Submit 18 months after starting (end of March for those who started in October)
<b>PG Symposium</b> on Friday 7 <sup>th</sup> July 2023	The PhD student will be required to present a poster on their work at the PG Symposium	Submit a poster draft with the final title to <b>Blackboard</b> . Date TBC
<b>Late Stage Review (LSR)</b> at 18 months	All students will do an LSR oral viva with two independent assessors using a poster from the PG symposium and a workplan for the rest of the PhD (see information above)	Submit LSR form to Blackboard by the <b>end of April</b> .
Complete <b>End of Year Progress Report</b>	Six-monthly progress report form completed by the student and supervisor online and separate online form completed by the student alone.	Submit 24 months after starting (end of September for those who started in October)

Third Year PhD Students		
Nature of assignment	Action for the student	Deadline
Complete <b>Mid-Year Progress Report</b>	Six-monthly progress report form completed by the student and supervisor online and separate online form completed by the student alone.	Submit 30 months after starting (end of March for those who started in October)
<b>PG Symposium</b> on Friday 7 <sup>th</sup> July 2023	The PhD student will be required to give a talk at the PG Symposium. If the student does not start in October, they will have the option of presenting a talk at this PG Symposium or in the following year.	<b>Submit a one-page abstract with the talk title</b> on Blackboard. Date TBC.
<b>Progress Review (3<sup>rd</sup> Year Chat)</b>	A senior member of staff (HoD, DPS, PG Senior Tutor etc.) will arrange the chat. PhD student should prepare a timetable of remaining work, which has been agreed with their main supervisor for this meeting.	Around 32-34 months after starting your PhD
<b>Writing up Status (WuS).</b>	To be considered eligible for entry to writing up status, <b>students must have successfully completed the Early-stage Assessment, Late-Stage Review and Progress Review (3<sup>rd</sup> Year Chat)</b> . In addition, students must have completed all experimental work and collection of material relating to their thesis and be in a position to submit their thesis within their writing up allowance. Further information at this link. <a href="http://www.imperial.ac.uk/registry/researchdegrees">www.imperial.ac.uk/registry/researchdegrees</a>	The WuS form must be completed and returned to the PG Administrator 2 weeks before the student plans to transfer to Writing up Status.
Complete <b>End of Year Progress Report</b>	Six-monthly progress report form completed by the student and supervisor online and separate online form completed by the student alone.	Submit 36 months after starting (end of September for those who started in October)
<b>Nomination of Examiners and Exam Entry form</b>	The PhD student must initiate the PhD examination process by completing the Exam Entry Form <b>online</b> through <a href="#">MyImperial</a> to which your supervisor will add the nominated examiners. See details above.	Submit the form <b>at least four months before you intend to submit your thesis.</b>
<b>Submission Checklist</b>	Please read information on submission at the link: <a href="#">Preparing your Thesis</a>	



<p><b>Preparing for Your Viva.</b> This film has been created by the Graduate School to help viva preparation:</p>	<p>Please click this link  <a href="https://www.imperial.ac.uk/students/success-guide/pgr/progression-and-feedback/thesis-submission-and-viva/preparing-for-your-viva/">https://www.imperial.ac.uk/students/success-guide/pgr/progression-and-feedback/thesis-submission-and-viva/preparing-for-your-viva/</a></p>	
<p><b>Submission of the Final Thesis</b></p>	<p>Your Final Thesis must be submitted online by <a href="#">uploading to Spiral</a> (the College's digital repository). Your submission will be checked by Research Degrees before being released to the Spiral team in the library, and your thesis will only be made available publicly on expiry of any agreed embargo. <b>Bound copies of the thesis and copies on CD are not required.</b> You do not need to submit any additional forms at final submission stage, so long as you have already submitted your Thesis Declaration Form.</p>	

## Student Surveys

Your feedback is important to the Department, the College and Imperial College Union. Whilst, there are a variety of means to give your feedback on your Imperial experience, do not miss your opportunity to express your views via the surveys below. Your feedback will help improve PhD provision for the later years of your studies and subsequent students.

Every two years, Imperial College participates in the national **Postgraduate Research Experience Survey (PRES)** run by the Higher Education Academy (HEA). This survey is important as it allows the College to benchmark itself against other UK higher education institutions and it provides information on whether it is meeting the high standards it aims to achieve. PRES last ran in 2021 and the dates for the next edition will be released in due course. PRES covers topics such as supervision, research community, progress and assessment, opportunities and research skills. It also includes additional questions about issues that are particularly important to us at Imperial such as graduate teaching activities and professional development. For further information on PRES see: <http://www.imperial.ac.uk/students/academic-support/student-surveys/pg-student-surveys/>

## USEFUL COLLEGE WEBSITES

### Student Support Zone

<https://www.imperial.ac.uk/student-support-zone/>

Faculty of Natural Sciences – Postgraduate Students Handbook

<http://www3.imperial.ac.uk/students/ourprinciples>

The following link, should contain all **Research Seminars** across the College:

<https://www.imperial.ac.uk/chemistry/news-and-events/events/>

The College's Student Charter, approved by Senate in June 2012.

<http://www3.imperial.ac.uk/students/ourprinciples>

Students and Supervisors – What to expect:

<https://www.imperial.ac.uk/students/success-guide/pgr/effective-research/working-with-your-supervisor>

Code of Practice for Research Students

[www.imperial.ac.uk/graduateschool/qualityassurance/codesofpractice/researchstudents](http://www.imperial.ac.uk/graduateschool/qualityassurance/codesofpractice/researchstudents)

Research Degrees Administration

<https://www.imperial.ac.uk/student-records-and-data/for-current-students/research-degrees/administration/>

Link to plagiarism awareness:

<https://www.imperial.ac.uk/admin-services/library/research-support/plagiarism-awareness-for-researchers/>

Information for students with disabilities, including the Disability Advisory Service:

<https://www.imperial.ac.uk/disability-advisory-service/>

# Early-Stage Assessment Report

## This is the title

Full Name,<sup>\*a</sup> Full Name<sup>a,b</sup> and Full Name<sup>b</sup> (PG student first, then Supervisor(s))

*Affiliations (inc. student's email address and CID number)*

5

Note that this report is normally between 6 and 10 pages in length; please make use of figures and illustrations where appropriate. The report should follow the journal format of an established publisher, e.g. the RSC:

<https://www.rsc.org/journals-books-databases/journal-authors-reviewers/prepare-your-article/>

## Abstract

10 The abstract should briefly explain the context and motivation for the work (Why are we doing it?); the main challenges involved (What are we trying to achieve?); the hypotheses that will be tested; the approach taken; and summarize the results obtained so far..

## 1 Introduction

15 Introduce your project in more detail: Why is it important, what is the motivation for the project? What is the current state-of-the-art in the field? What are your hypotheses and which approach(es) will you use to address those? What do you expect to find and how do you move on from there? What is the novel and significant contribution that you hope to achieve by the end of your PhD?

## 2 Experimental (or Methods)

20 This section should contain an explanation of why the particular methodology has been adopted and a description of the technical details of your work, depending on the nature of your project (computational methods, synthetic techniques, description of instrumentation used, chemicals inc. source, purity etc.).

## 3 Results & Discussion

25 As far as available, show a number of key results you have obtained in your PhD so far. These may well be preliminary results or conflicting data - as long as you put them into context. A good approach is to describe the results first and then discuss the meaning (interpretation) - do not jump from one to the other and back as this makes the text difficult to follow.

## 4 Conclusions

What are the main conclusions from your work so far?

## 5 Future Plans and Outlook

35 Based on what you have achieved so far, what are the next steps? What do you expect the main challenges to be? What are your fall-back options ("Plan B")?

*Please provide a Gantt chart covering the entire duration of your PhD on a separate sheet. Try to be reasonably accurate - the further you look into the future of your project, the less specific you are likely to be.*

## Electronic Supporting Information (ESI)

45 Where applicable, please provide any additional relevant information, for example further experimental data (e.g., spectra etc.), tables, derivations and so forth. The above page limit does not include the ESI. However, the main text must be comprehensible as a unit - for example, moving the entire Methods section to the ESI to gain space in the main text is not permitted. Normally, the ESI does not contain extensive discussion of the results and is more descriptive in nature.

## Notes and references

<sup>a</sup> Address, Address, Town, Country. Fax: XX XXXX XXXX; Tel: XX XXXX XXXX; E-mail: xxxx@aaa.bbb.ccc

<sup>b</sup> Address, Address, Town, Country. Fax: XX XXXX XXXX; Tel: XX XXXX XXXX; E-mail: xxxx@aaa.bbb.ccc

55 † Electronic Supplementary Information (ESI) available: [details of any supplementary information available should be included here]. See DOI: 10.1039/b000000x/

‡ Footnotes should appear here. These might include comments relevant to but not central to the matter under discussion, limited experimental and spectral data, and crystallographic data.

1 A. Name, B. Name and C. Name, *Journal Title*, 2000, **35**, 3523; A. Name, B. Name and C. Name, *Journal Title*, 2000, **35**, 3523.