



Doctoral Training Programme 2022/23 HANDBOOK

YEAR 2

Imperial College
London



ROYAL
HOLLOWAY
UNIVERSITY
OF LONDON

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Welcome back

Welcome to the second year of your PhD. We are excited to provide you with a wholly face-to-face training and cohort building programme for the first time. As for your first year we have put together a training package that we think is suited to your stage of education and we hope that you find all the courses and events useful. However, this is very much your training programme and we want to hear from you if there are other activities that you would like us to run or if you have feedback on the programme in general (ntp@imperial.ac.uk). There is money available for you to run your own event. So discuss amongst yourselves and with your student rep and let us know if this is something you would like, as a cohort, to take advantage of.

We will move to a newsletter form of communication this year. The newsletters will arrive in your inbox roughly once a month and will have details of upcoming events as well as other important information relevant to the training programme. We hope that this form of communication will be much more effective. As always don't hesitate to reach out directly or through your student rep, Charlotte (c.manser21@imperial.ac.uk), if you have any issues you would like to raise with us about the newsletter or anything else.

We look forward to seeing you all again at our Welcome event for the new first year PhD students on **21st October (see details below)**. This will be a great opportunity to see your own cohort again as well as mix with the other year groups.

Bernadette Byrne

Director of the BBSRC DTP

The DTP Team

BBSRC DTP Director



Prof Bernadette Byrne

Bernadette's role is to oversee the overall successful delivery of the training programme ensuring that you are given the appropriate training and support to complete your PhD and that you have every chance to exploit all development opportunities available to you both at Imperial College London and Royal Holloway University of London.

b.byrne@imperial.ac.uk

BBSRC DTP Manager



Dr Nadia Guerra

Nadia looks after the day-to-day management of the programme and is your direct contact to discuss PIPS placements. Nadia ensures that students recruitment, supervision and training are effectively delivered towards getting the best possible experience throughout the programme.

n.guerra@imperial.ac.uk

BBSRC DTP RHUL Lead



Prof Vincent Jansen

Vincent is the academic lead at RHUL and can provide help and advice on the programme to students registered there.

vincent.jansen@rhul.ac.uk

BBSRC DTP Cohort Leader



Dr Tolga Bozkurt

Tolga is responsible for the management and administration of cohort activities including organisation of cohort delivered Graduate School courses, careers events and the Annual Symposium. If you have any activities that you would like us to organise for you or help in organising your own cohort event, please contact Tolga.

o.bozkurt@imperial.ac.uk

BBSRC DTP Administrator



Rozan Hamilton-Nixon

Rozan is the initial point of contact for all BBSRC DTP issues. She is responsible for obtaining and managing all data relevant to the DTP students, supervisors, and the research projects. She will liaise with you directly to organize events and request information as required. She maintains and updates our database of PIPS placements and will monitor all aspects of your DTP focused training. She is responsible for recording the outputs of your individual studentships and will ask for updates on presentations, publications, training events and your PIPS placement.

r.hamilton-nixon@imperial.ac.uk

PG Research Administrator



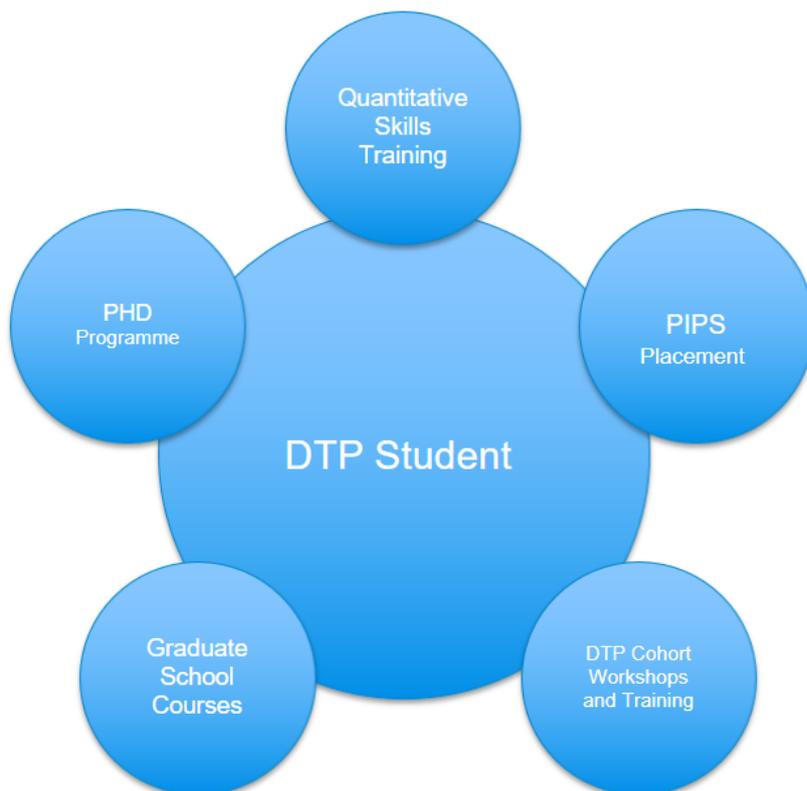
James Ferguson

James oversees administration of all DTP funds. All funds will be managed via this single point source in the Department of Life Sciences. If you have issues with any financial aspects of your studentship, contact Rozan in the first instance who will then liaise with James.

james.ferguson@imperial.ac.uk

What to expect

A student-centred approach



The Doctoral Training Programme centres around you, the student, with training and activities that support you through, and alongside, your PhD programme.

This includes:

- Quantitative skills education provides maths and computing training for bioscience researchers.
- Placement within business or industry to aid your professional networking (not mandatory for students funded by the Department of Life Sciences), see page 5 for further information); and PIPS placements for BBSRC funded students into business and industry to aid your professional networking.
- Workshops and training planned and developed throughout the academic year to support the DTP cohorts' interests, areas of research and cohort building
- Training and workshops aimed at professional development through Imperial College London's Graduate School.

More comprehensive information on these activities and further resources are detailed through the rest of this handbook.

1-2-1 support

As last year 1-2-1 meetings will be held twice a year either face-to-face or remotely with your assigned DTP mentor. We will contact you in due course with the dates for these. Please continue to use these as an additional route to tell us how we can support you better. However, if there is something specific you would like to tell us then feel free to contact us directly via email at any point.

Quantitative Skills Training

There is a strong quantitative skills component to the DTP. We recognise that there is no one size fits all approach to this given that our students come from a wide variety of academic backgrounds. Thus, you are free to choose three courses from the list provided below that best suit your specific needs.

A form (linked below) must be completed by the 10 November 2022 with the three selected courses that you will be completing. It is **an absolute requirement** of the DTP that you complete these training courses.

If you have not yet completed the basic courses below:

[Data exploration and Visualization](#)

[R Programming](#)

[Data Processing with R](#)

Whereas if you are more experienced then you're better taking:

Advanced programming: [Introduction to Python \(online self-study\)](#)

[Introduction to C++](#)

Machine learning: [Introduction to Machine Learning](#)

[Machine Learning with Python](#)

Software Engineering: [Essential Software Engineering for Researchers](#)

[Using Git to Code, Collaborate & Share](#)

Alternatively you can attend the mini workshop series detailed below

A short series of mini-project-based workshops to develop your data science skills, focused on some of the most common types of analysis in life sciences. Four weekly workshops (online on Teams). It is strongly recommended that you attend all 4 workshops to get exposure to the full range of methods. To a certain extent, the projects will be building on each other from week to week. You will need to be willing to commit approximately 2 hours to work on the mini-project during the week before each workshop. Please note that this course is not for R beginners: this is an intermediate-level course that assumes you have prior experience of programming in R.

Pre-requisites:

- Essential: familiarity with the R language (e.g. have attended the Introduction to R graduate school course).
- Strongly recommended: familiarity with the tidyverse libraries for data handling and graph plotting (e.g. have attended the Data Processing with R graduate school course).

7/03/2023	Working with data: Databases, data wrangling and hypothesis testing	14:00 – 15:00
14/03/2023	Linear models: Predictive models with one or more explanatory variables	14:00 – 15:00
21/03/2023	Genomics: Analysis of RNA-seq data using the bioconductor package	14:00 – 15:00

To Book this course you will need to log into the booking system (Inkpath) with your imperial email address and username by no later than 9 February 2023, 9:00. Booking link: <https://tinyurl.com/cohort-r-lifesciences>

If you need further help deciding which courses are best to take then please contact the Cohort Leader, Tolga Bozkurt (o.bozkurt@imperial.ac.uk).

[Complete this form](#) by the 10 November indicating which courses you have selected to take, we will follow up on completion.

PhD Student Placement

Requirements for students funded by Department of Life Sciences, Imperial College London only

For students funded on Department of Life Sciences PhD scholarships, it is possible to undertake a placement of up to 3 months in length. Please note that the placement is not mandatory, and you will only be able to take one of these upon approval from your supervisor. The timing and duration of the placement both must be discussed and agreed with your supervisor, although in theory it is possible to undertake this at any point during the PhD. Once a placement is confirmed, students **must** complete a *Placement Proforma*, attach a work contract or Memorandum of Understanding, get the *Placement Proforma* signed by your supervisor and send it to dtp@imperial.ac.uk for the DTP Management Committee to approve. **The *Placement Proforma* should be sent no later than four weeks in advance of the placement start date.** Please contact Nadia Guerra (n.guerra@imperial.ac.uk) if you would like to obtain more information.

Professional Internships for PhD Students (PIPS):

Requirement for students funded by BBSRC only

A key component of the BBSRC Doctoral Training Partnerships (DTP) programme is the Professional Internships for PhD Students (PIPS) – a three month integrated unpaid placement that aims to provide PhD students with the opportunity to carry out work experience unrelated to their doctoral research. It has been recognized that it is important that PhD students get the opportunity to experience working in a professional environment, typically outside research laboratories. Such experience is important both to help early career researchers understand the context of their research and to expose them to the range of opportunities in which they can apply their PhD skills and training after they graduate. As such, **the PIPS project must be clearly unrelated to your PhD project and form no part of your PhD research.** [Information on searching for a placement and the approval placement can be found here](#) For further information regarding PIPS requirements, a directory of recent PIPS hosts, and PIPS case studies see [Addendum 2](#).

DTP Cohort Training and Workshops

Throughout the academic year there are a variety of training and cohort events delivered as part of the DTP. DTP students are expected to attend all the events as detailed below.

Please note that it is mandatory to attend any GS courses organised through the DTP.

Annual Symposium

This year our annual symposium will be held on **Thursday 6th July 2023** and is compulsory for all DTP students to attend. Further details will follow nearer the time. Students in the first year are invited to give a 5 minute, 1 slide presentation of their PhD project. Second year students will present posters and selected third year students will give 10 minute oral presentations. The annual symposium is also an opportunity to hear the experiences of students who have recently returned from their PIPS placement. We invite a world-leading expert to give a research presentation at the Symposium, so let us know if you have ideas for speakers. This event is likely to be held face to face and precise details of the location will follow later in the year.

Careers Speaker Series

Starting in 2023 we will be running a series of Careers Events open to all years of the DTP. Speakers from a range of different academic and industrial settings will share their career experiences. We anticipate that these will include former DTP students. The details of the different events will be communicated to you via email. If you have any suggestions or requests for topics or speakers for this series, send them to ntp@imperial.ac.uk. The dates for this series are given below.

Date	Time
16 th March 2023	17:00 – 18:00
22 nd June 2023	17:00 – 18:00

Upcoming Events

Cohort events in academic year to look forward to.

Date	Event	Time
21 st October 2022	Welcome Back (in-person, Flowers G47)	16:45 - 18:00
5 th December 2022	Lunch Social Catch-up (in-person)	12:30 – 13:30
15 th December 2022	Xmas event (in person)	17:30 – 20:30
10 th February 2023	Lunch Social (in-person)	13:00 – 14:00
11 May 2023	Away Day	All Day
6 th July 2023	Annual Symposium (in person)	All day

Requesting Training and Workshops

We aim to offer training and workshops to support DTP students' needs, research areas and topics. You can email ntp@imperial.ac.uk if you have any requests for training, workshops or speakers.

The Graduate School Workshops

The Graduate School at Imperial College London runs a variety of workshops to support PhD students in their professional development. The following courses will be taking place in the Autumn and Spring terms for the second year DTP Cohort. **Imperial College Students must book into each course**; see details on how to do this below. **RHUL students please see separate note below.**

Date	Course	Time
08/11/2022	Enhance your Leadership Skills (in-person)	14:00 – 17:00
29/11/2022	Academic Resilience (in-person)	10:00 – 13:00
11/01/2023	Effective CVs and Applications (in-person)	10:00 – 12:00
16/01/2023	Writing Papers: Publications (online)	14:00 – 16:30

How to book into Graduate School courses

You must book into **all** courses listed above by no later than Monday 17th October 2022. See booking links below. You will need to log into the booking system (Inkpath) with your imperial email address and username.

1. **Enhance your Leadership Skills**

Booking Link: <https://tinyurl.com/cohortenhanceleadership081122>

Your tutor, Paul Seldon, will provide all pre-course information approximately two weeks before the course is due to take place.

2. **Academic Resilience**

Booking Link: <https://tinyurl.com/cohortacademicres291122>

Your tutor, Paul Seldon, will provide all pre-course information approximately two weeks before the course is due to take place.

3. **Effective CVs & Applications**

Booking Link: <https://tinyurl.com/cohortcvs110123>

You will receive all pre-course information from the booking system, Inkpath. Keep this for your records and add the course to your Microsoft Outlook calendar

4. **Writing Papers: Publications**

Booking Link: <https://tinyurl.com/cohortpublicationmed160123>

Your tutor, Paul Seldon, will provide all pre-course information approximately two weeks before the course is due to take place.

Please note, you will need to complete pre-course tasks as well as fully attend the live session to receive a course credit. If you have any problems, please contact the [graduate school](#) directly.

Note to RHUL students

You have already been issued with an Imperial College guest username and password. You should have received an email with these details on the 6th October 2022. Contact dtp@imperial.ac.uk if you have not received these details. You will need this information to access the training sessions.

You will not be able to book the courses through the links above. You will receive an email prior to each training course with details on the course and relevant information for each course.

Research Outputs

We are very keen to hear about any research presentations you may give at local, national or international conferences and associated prizes awarded. If you have been to a particularly interesting conference and would like to write a short (half side of A4) conference report we would be very interested to receive this. We also would like to obtain details of scientific manuscripts accepted for publication in due course. In addition, we welcome reports on any outreach activities you might undertake related to your studies. We will advertise these on the BBSRC DTP website.

Research Training and Consumables

Each studentship comes with £5k/ annum for training and consumables costs. The funds can be used for research expenses, training and research associated travel expenses.

In order to claim back conference associated expenses email ntp@imperial.ac.uk and request a claims form.

Disability Support

The DTP will support the accommodation of reasonable adjustments to allow students with disabilities to complete their research projects. In order to access these funds, in the form of a Disabled Student Allowance, contact the DTP (ntp@imperial.ac.uk) to make an appointment to discuss your specific requirements.

The [Disabled Advisory Service](#) at Imperial College London and the [Disability and Dyslexia Service](#) at Royal Holloway are here to help support students with declared disabilities, long standing medical conditions, specific learning difficulties and mental health conditions.

Further Resources

The DTP website

Visit our website to learn more about the programme, upcoming events, the DTP student representatives, and featured DTP students. If you would like to be included on the *Student Spotlight* page, you can submit your information [here](#).

 <https://www.imperial.ac.uk/bbsrc-doctoral-training-partnership>

Activate Student Mentoring Programme to PhD students of Black heritage

The Activate Mentoring Programme seeks to match mentees with mentors who have insight and understanding of the educational experience of students of Black heritage and the challenges they face within education and navigating College life.

 <https://www.imperial.ac.uk/students/academic-support/graduate-school/community-support/activate-student-mentoring-programme/>

Changes due to Coronavirus (COVID-19)

Imperial College London Students

The College will keep you informed about any further changes that may affect you due to the impact of coronavirus (COVID-19). The COVID-19 FAQs on the website are a repository of helpful information and the latest guidance can be found at:

 <https://www.imperial.ac.uk/about/covid-19/>

Royal Holloway University of London Students

Postgraduate research students can find information and updates regarding coronavirus (COVID-19) at:

 <https://intranet.royalholloway.ac.uk/doctoral-school/news-events/information-on-coronavirus.aspx>

Contact Us

The first point of contact for any queries relating to the DTP is to email dtp@imperial.ac.uk.

Addendum 1 (Training Event Table)

DTP - YEAR 2

OCTOBER	TIME	EVENT	VENUE
21-10-2022	16:45 - 18:00	Meet & Greet Welcome Event	G47a&b, Flowers Building, South Kensington Campus
NOVEMBER	TIME	EVENT	VENUE
08-11-2022	14:00 - 17:00	Enhance Your Leadership Skills (GS)*	In-person, South Kensington Campus (venue details provided on booking)
29-11-2022	10:00 - 13:00	Academic Resilience (GS)*	In-person, South Kensington Campus (venue details provided on booking)
DECEMBER	TIME	EVENT	VENUE
05-12-2022	12:30 - 13:30	Lunch Social Catch-up	G47A, Flowers Building, South Kensington Campus
15-12-2022	17:30 - 20:30	Xmas Event	in-person - TBC
JANUARY	TIME	EVENT	VENUE
11-01-2023	10:00 - 12:00	Effective CVs & Applications (GS)*	In-person, South Kensington Campus (venue details provided on booking)
16-01-2023	14:00 - 16:30	Publications: Writing Papers (GS)*	Online
FEBRUARY	TIME	EVENT	VENUE
10-02-2023	13:00 - 14:00	Lunch Social Catch-up	SECB 701 Common Room
MARCH	TIME	EVENT	VENUE
16-03-2023	17:00 - 18:00	Speaker Series - March Event	121, SAFB, South Kensington Campus
APRIL	TIME	EVENT	VENUE
No Events			
MAY	TIME	EVENT	VENUE
11-05-2023	All Day	Away Day	Silwood Park Campus

JUNE	TIME	EVENT	VENUE
22-06-2023	17:00 - 18:00	Speaker Series - June Event	121, SAFB, South Kensington Campus
JULY	TIME	EVENT	VENUE
06-07-2023	All Day	Annual Symposium	In-person, venue TBC

NB This schedule does not include your Quantitative training. You must book into your chosen 3 data skills training courses as detailed in the handbook

* Ensure you book into these Graduate school courses by **17 Oct**. See handbook for booking links and details.

Other Important Deadlines:

17-10-2022	Graduate school courses booking deadline - see handbook for booking links and instructions, pg. 8
10-11-2022	Quantitative Skills Training course selection form, complete the form linked in your handbook, pg. 5 & 6
09-02-2023	Data Science mini-workshops booking deadline, see handbook for booking links and information, pg5&6

Addendum 2 (PIPS Information)

What is a PIPS?

PIPS is a 3-month placement in a professional environment that is non-academic, and with a project that is not related to your field of research.

- You cannot carry out a research project in academia, even if the field is unrelated to your research
- You must choose a PIPS that is not related to your field of research
- The PIPS cannot be in an academic research setting.
- PIPS cannot be done during the thesis writing period

What is the objective of your PIPS?

- The objective of your PIPS is to give you an opportunity to gain work experience in a non-academic background. The broader aim is to help you, as an early career researcher, to understand the context of your research and be exposed to a range of career opportunities available after graduation.

During the internship you may wish to gain skills and experience in the following areas

- Being customer focused
- Influencing others
- Leading, developing and managing people
- Managing finances and resources
- Planning and organising
- Problem-solving and making decisions
- Pursuing professional excellence in a particular non-academic environment
- Thinking and acting strategically

Examples of different types or environments for PIPS include:

- Industry:
 - A short desk-based research project
 - review or analysis of manufacturing, processing or production techniques
 - non-research roles such as marketing, publishing or sales
 - business development or project management
- Legal offices:
 - Patent related project
 - Research contracts
- Consultancy:
 - Auditing project
 - Research project
- Teaching:

- in schools, using the Researchers in Residence scheme, or through other mechanisms
- Policy sector:
 - Developing policy or working in a related setting, such as a government department
 - Local authority, non-departmental public body, professional association, charity (with clear links to scientific activities), research funder or medical organisation (such as NHS Primary Care Trust)
- Media industry:
 - a wide variety of roles are possible here that help students understand the wider societal context of their research. Such internships could include working in science communication roles or other roles in:
 - Press Office
 - Science publishing company
 - Zoo, museum or botanical gardens – for outreach projects or research assignments.

Can PIPS be carried out abroad?

It is likely that you will be able to carry out good quality PIPS locally. PIPS can however be taken abroad but any extra costs associated with this should be met by the PhD student and/or host organisation. If you are considering an internship abroad, you will have to fill in the **PIPS Abroad Pre-departure Checklist – FORM**

List of recent PIPS hosts

CHAIN Biotech Ltd
Structural Biology PIPS Practical Development
BioCruicable
Bit Bio
LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE
Fusion Medical Animation
Pharma Consulting Internship at Inpharmatio
Rothamsted Research
Phospho Biomedical Animation
Atlas Pharma Consulting
London Biofoundry
NK:IO
Business development at Baccuico

PIPS case studies

1. Tomas completed his PIPS at Imperial College London, where he designed online practicals for second-year Biochemistry students studying remotely. He used his knowledge of Bioinformatics and Structural Biology to design engaging activities to help students expand their understanding of the material taught in lectures and guided them through online Q&A sessions.
2. Vivian undertook her PIPS placement with a new consulting company called Atlas Consulting. Atlas belongs to the Avalon Group, and she also had opportunities to collaborate with its sister company Aurora. Atlas collaborates with pharma companies and advises them on how to incorporate patient engagement in their operating strategy. The ultimate mission of the company is to improve patient outcomes by including the patient's perspective in the design of medication and treatment solutions. Vivian had the opportunity to work on various projects focusing on different disease areas, ranging from oncology to respiratory diseases. Her understanding of science enabled the translation of clinical trial results and published studies into information readily understandable to the whole company. This was used to identify "gaps" in patient treatments and services, that could be addressed by strategies designed by Atlas to empower patients and engage them. Vivian was also involved in the marketing and business aspect of the work. She has taken a complex theory (outcomes science) and translated it into a piece of marketing collateral that can be shared with prospects, while also participating in company-wide planning sessions. Vivian had a significant impact on Atlas' business, and aided proposals that contribute to the future growth of the company.
3. Anthony joined the team at Fusion Medical Animation, a BAFTA and EMMY award-winning animation studio producing mode of action videos for the Pharma and Healthcare industries. He learned the workflow of a professional animation project and how to use the 3ds Max software. Anthony gained a new set of skills when it comes to science communication, particularly for structural biology.
4. Louie undertook his PIPS placement with a recently created bio-tech startup called Peptone, The Protein Intelligence Company. The ultimate mission of the organisation is to provide critical solutions for Big Pharma and Biotech by combining "computational biophysics, non-linear modelling, statistical approaches to structural protein biochemistry and progressive AI to explore combinatorial mutagenesis landscapes of any protein, irrespective of its class and application." Louie's role within Peptone was both challenging and highly rewarding. The primary focus of the project was researching and developing a series of computational scripts which formed the basis of biophysical tools. These tools will go on to be used in conjunction with machine learning and quantum computing approaches to improve proteins for pharmaceutical companies. This work was all conducted on a remote working platform in concert with code sharing tools which enabled cooperation with the other members of the company. This mode of working was new for Louie, however it proved to be a highly effective and fluid way of subdividing tasks, enabling them to tackle larger problems together.

5. Oliver Stringer completed his PIPs placement with Biocrucible, a Cambridge based company who utilise a novel molecular technology platform to significantly improve the performance of diagnostic processes. During his placement Oliver gained invaluable insight into the workings of a biotech start-up company, including funding pathways and grant applications as well as contributing solutions to dealing with an immediate real-world problem. Oliver also gained experience in a wide range of fields including protein engineering, protein purification and QC processes in an industrial setting. Some of the data he produced was used for funding rounds and patent applications. Oliver reported that he found the PIPS extremely enjoyable but challenging in terms of the variety of activities he took part in on a daily basis. The placement showed him that working within industry is a lot more collaborative and inclusive than academia with the workforce both focused and constantly helping each other. Oliver reported that the experience has substantially helped with his doctoral research, as he has put the experience gained in his PIPs to good use, getting involved with an external industry partnership, in order to lyophilise a reaction mixture produced as part of his PhD. He also reports that he is now more likely to search for a job in industry than in academia.