

Imperial College
London

Graduate School

Annual Report

2020-2021



Highlights



The 4Cs Science Communication Competition, which took place remotely in March 2021



Students enjoying a cohort building day trip to the Isle of White courtesy of the Research Community Fund, June 2021



Students enjoying a cohort building walking tour of London courtesy of the Research Community Fund, September 2021

1 Students as Partners

Our second group of recruits were welcomed in 2020-21, giving students from across College the chance to engage with our Professional Development Programme to help shape design.

2 Course Statistics

503 doctoral professional skills courses were delivered in 2020-21 with 7,816 student attendances. 123 Masterclasses were delivered with 3,391 student attendances.

3 Listening to Students

The Graduate School worked on a myriad of different projects in 2019-20, in response to feedback received from students. See Section 7 of the report for further information.

4 Professional Body Accreditation

The Graduate School continues to work with professional bodies to align provision with professional body continuing professional development programmes.

5 Events

Four College wide events for postgraduate students were organised providing opportunities to engage with peers and communicate science with the wider College community.

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SECTION ONE

Introduction

Introduction to the Graduate School

1.1.1 The primary purpose of the Graduate School is to develop and deliver a world-class, innovative and engaging provision ensuring all postgraduate students are provided with excellent professional development training complementing their academic studies and providing opportunity to develop skills for a range of careers. Informed by an External Advisory Board comprising industry representatives, the Graduate School's professional development programme offers students the chance to develop skills which are of most value to many employers. Additionally, the Graduate School's College wide events provide opportunities for students from across all disciplines to network and engage in interdisciplinary discussions.

1.1.2 The Graduate School also has a role in supporting wellbeing and enhancing the postgraduate student experience and has a cohort building programme, postgraduate coaching programme and a research degree mediation service to facilitate this.

The Graduate School's Mission Statement & Strategy

The Graduate School is proud to deliver award winning and sector leading professional development opportunities to postgraduate students at Imperial College London. Professional development is a key part of the educational experience at Imperial and our programme offers opportunity for postgraduates to develop attributes which are of most value to a broad range of employers and supports students to develop as world-class researchers.

The programme supports students with specific development needs as well as providing specialist training which aims to challenge and inspire students who are excelling. Courses are delivered through multi-mode ensuring that they are inclusive and accessible to all.

There are a range of opportunities for students, staff and the sector to engage with the programme and shape its design and delivery.

Our strategy is divided into four distinct but related areas. Each strategic area has a set of aims and a framework setting out how we will achieve what we say we will.

- Supporting World-Class Research

The Graduate School's programme supports students to develop as world-class researchers. Whilst discipline specific and technical skills training is provided by academic departments, the Graduate School's programme delivers core research skills programmes. These core programmes provide students with a range of development opportunities from research writing and communication skills to research integrity. The programme is accredited by three professional bodies to provide recognition for researchers' development during their doctorate.

- Community, Belonging and Support

The Graduate School champions the visibility and voice of postgraduate students across College. Our provision enables connectedness via interdisciplinary discussions and the opportunity for postgraduates to share and celebrate their research success as part of an inclusive, vibrant and supportive research community.

- Engagement and Impact

The Graduate School's provision enables postgraduates to understand the importance of engaging with a range of audiences to ensure knowledge exchange between sectors. The Graduate School encourages and supports student engagement with the public to share in the wonder of discovery and research and the value of working with local communities to shape research design. The Graduate School enables postgraduates to understand the importance of how their research can inform key decision makers in governments contribute towards and influence policy change. The Graduate School provides postgraduates with the opportunity to engage and knowledge exchange with industry to support a growth innovation economy.

- Developing Students who Teach

The Graduate School has developed a programme of training and support for Graduate Teaching Assistants (GTAs) who are engaged in teaching, demonstrating, marking, assessing and providing feedback to students. The programme is accredited by the Higher Education Academy and programme participants are eligible to apply for Associate Fellowship of the HEA.

Structure of the Graduate School

The Graduate School is led by the Director Professor Yun Xu, and Deputy Directors, Professor Peter Allison, and Professor Laki Buluwela, who work in partnership with the Head of Strategy and Operations, Mrs Laura Lane. The wider team comprises a teaching team and an administrative team.



Fig. 1 - Dr Chris Meadows

Welcome to new members of the Graduate School

In May 2021, the Graduate School welcomed Dr Chris Meadows, Senior Learning Designer to the team.



Fig. 2 - Mr Robbie Bennett

In July 2021, the Graduate School welcomed Mr Robbie Bennett, Postgraduate Development Officer, to the team.

Thank you to outgoing members of staff

The Graduate School would like to extend its thanks to the following members of staff who moved on during the 2020-21 academic session,

- Mr Jorge Freire - Senior Learning Designer
- Mr Nick Moulton - Postgraduate Development Officer
- Dr Jane-Lisa Coughlan – Senior Teaching Fellow, Enterprise and Industry xChange
- Ms Amy Barnes, - Enterprise and Industry xChange Coordinator

COVID-19 – The Graduate School’s Response to the Global Pandemic

- Course Delivery

The continuation COVID-19 pandemic meant that many College activities had to be delivered remotely for the entirety of the 2020-21 academic session. The Graduate School was able to deliver the professional development courses, events and other activities online, with only a few exceptions. During the 2020-21 academic year, the Graduate School delivered 626 online sessions to Postgraduate Students across the College.

- Student Support

As well as ensuring that the Professional Development opportunities could be delivered to students throughout lockdown and beyond, the Graduate School also played a lead role in the following College-wide student support measures,

- Student stipend extensions
- Good practice guidance for remote PhD supervision and Vivas
- Revisions to the College’s Mutual Expectations document to reflect remote working and EDI
- Guidance for students on the implementation of the College’s registration extensions and associated fee waivers
- Covid-19 Thesis Impact Statements

It was widely recognised that lockdown and Global pandemic would have an impact on student’s wellbeing and mental health. As such, local arrangements were made to open out the Doctoral Coaching programme to Master’s students; the Graduate School’s team of qualified coaches were available for online student coaching sessions throughout. Professional skills tuition was also offered on a 1-2-1 basis, the Research Computing Skills team advertised their willingness to give additional support to students using the College’s central computing resources and/or for anyone wanting a general introduction as to what research computing resources were available via the College. Finally, the Graduate School advertised that students could feed back any concerns they might have about the pandemic with a view to raising these at the College’s Covid-19 response groups.

SECTION TWO

Graduate School provision 2020–21

Professional Skills Development for Research Students

In 2020-21, the Graduate School's programme of professional development courses for doctoral students was divided into the following stimulating programme areas:

- Research Communication
- Research Impact
- Research Computing & Data Science Skills
- Professional Effectiveness
- Professional Progression
- Industry & Enterprise
- Graduate Teaching Assistants (GTA)
- Research Integrity

Each programme includes advanced level courses to accommodate more experienced research students as well as basic level skills training to help others develop new skills and understanding.

The Graduate School delivered all scheduled courses and activities online, using Adobe Connect, MS Teams and Zoom. The offer this year included all of the courses that would normally be part of our offer, with the exception of two retreats that could not be translated successfully into an online environment (Team Building and Communication and Research Impact).

In collaboration with the Centre for Academic English (CfAE), the Graduate School delivers a two-day Thesis Writing Retreat, which was successfully delivered online during 2020-21. Over two days, students have time for writing, as well as for discussion, review and reflection. There is also the opportunity to attend a maximum of six optional plenary talks, which address specific writing issues. A strong element of support is also embedded; tutors from the Graduate School and from the CfAE are available for 1:1 support throughout. The successful design which was used as a template model for further online retreats and was also highlighted at an international conference.

The professional development programme also features a Times Higher Education (THE) Award winning course – FUMO (Finish up, Move on). FUMO is an interactive two-day course which is recommended to students who are in the later stages of their doctorate. It covers

what students need to know to successfully complete their research degree and move on to the next phase of their career. The programme includes discussion, reflection and practical exercises. During this past year, FUMO successfully ran online using MS Teams and Zoom.

The Graduate School has two online videos, Presentation Skills and Passing your Viva, which are available for students to view online at any time.

Also available online are "help sheets" for writing, presentation and career planning and a Maths and Stats catch up course, which students can complete at any time.

These resources are all available to view here,

www.imperial.ac.uk/study/pg/graduate-school/students/doctoral/professional-development/online-learning-resources

Students have over 100 different short courses to choose from. A full list of doctoral courses delivered in 2020-21 is shown in Table 1.

Innovation Area	Course Title
RESEARCH COMMUNICATION PROGRAMME	Thesis Writing Retreat
	Critical Thinking for Communication
	Grant Applications
	Literature Review
	Publication: BEPS
	Publication: MLSPD
	A Scientific Approach to Research Communication
	Thesis (Developing and Producing your Research)
	The Writing Room Event
	Preparing for Thesis Submission, Examination & Open Access
	Poster Top Tips
	Present your Poster!
	Conferences and Seminars
	Advanced Presentations
RESEARCH IMPACT PROGRAMME	Making an Impact
	Alternative Ways to Measure your Research Impact
	Public Engagement
	Communicating Research in Schools
	Evaluating Engagement
	Public Involvement in Research
RESEARCH COMPUTING & DATA SCIENCE	Essential Software Engineering for Researchers
	Introduction to C++
	Introduction to Fortran
	Introduction to HPC at Imperial
	Introduction to LaTeX
	Introduction to MATLAB

Table 1: Doctoral professional skills courses delivered in 2020-21

Innovation Area	Course Title
RESEARCH COMPUTING & DATA SCIENCE (CONT.)	Introduction to Python
	The Linux Command Line for Scientific Computing
	Profiling and Optimisation in Python
	Using Git code, Collaborate and Share
	Writing Thesis in LaTeX
	Basic Statistics
	Data Exploration & Visualisation
	Data Processing with Python Pandas
	Data Processing with R
	Introduction to Sampling & Hypothesis Testing
	Further Hypothesis Testing
	Introduction to Statistics Using SPSS
	R Programming
	Regression Modelling
RESEARCH INTEGRITY	Plagiarism Awareness
	Intellectual Property
	Copyright for Researchers
	Introduction to making your course open access
	Science, Research and Integrity
	Information Landscape: Information Retrieval
	Information Landscape: EndNote
	Information Landscape: Introducing the web of Science Database
	Information Landscape: Keeping your Research Up to Date
	Information Landscape: Data Management
	Information Landscape: Research Data Management Plans
	Introduction to Philosophy – Knowledge, Truth & Science?

Table 1: Doctoral professional skills courses delivered in 2020-21 (cont.)

Innovation Area	Course Title
PROFESSIONAL EFFECTIVENESS PROGRAMME	Becoming an Effective Researcher
	Time Management for your Doctorate
	Put Project Management into Action
	Planning & Preparing for your Thesis & Viva
	Social Sciences & Medicine – Research Design
	Introduction to MBTI
	Introduction to Clifton Strengths Finder
	Enhancing Wellbeing for Doctoral Researchers
	Academic Resilience
	Enhance your Leadership Skills
	Introduction to Unconscious Bias
	Understanding and Developing Assertiveness
	It's your PhD: Managing the Supervisor-Studentship Partnership
PROFESSIONAL PROGRESSION PROGRAMME	Finish Up Move On + (FUMO)
	Networking for Progressing Your PhD
	Negotiation for Your Doctorate and Beyond
	Maintaining your Motivation and Building Independence
	Thinking about doing a Postdoc?
	Ask the Doctor: Your Chance to Chat with a Doctoral Graduate at Work
	An Introduction to Career Planning for 1st & 2nd year PhDs: Life Sciences & Medicine
	An Introduction to Career Planning for 1st & 2nd year PhDs: Business, Engineering & Physical Sciences
	Effective CVs and Applications
	Job search with a Difference
	Preparing for Interviews

Table 1: Doctoral professional skills courses delivered in 2020-21 (cont.)

Innovation Area	Course Title
GTA PROGRAMME	Introduction to Learning & Teaching
	Introduction to Assessment & Feedback for Learning
	Microteaching
	GTA Retreat
	Applying for Associate Fellowship of HEA
	Facilitating Learning in Small Groups
	Supporting Active Learning in Labs
INDUSTRY & ENTERPRISE PROGRAMME	Industrial Xchange Retreats
	Developing an Entrepreneurial Mindset
	Generating creative ideas
	Designing Business Models
	Pitching to Industry

Table 1: Doctoral professional skills courses delivered in 2020-21 (cont.)

GTA Training – STAR Framework

The Graduate School has developed the GTA Programme (GTAP), which consists of a range of courses to support doctoral students who teach. The current courses are:

Table 2: Graduate School Teaching Courses

Introduction to Learning and Teaching
Introduction to Assessment and Feedback for Learning
Microteaching
Promoting Active Learning in Labs
Facilitating learning in Small Groups
Applying for Associate Fellowship (AFHEA)
Teaching: GTA Retreat

The introductory courses are core and must be attended before GTAs can teach at College (unless they attend local provision). Where possible, the core courses are team-taught with experienced peer GTAs, who are able to provide discipline-specific insights. This is particularly the case in the Faculty of Engineering.

GTAP has been accredited by the HEA as a taught pathway in the College's STAR Framework, so programme participants are eligible to apply for professional recognition of their teaching in the form of Associate Fellowship of the HEA (AFHEA).

The Graduate School is also responsible for the College's Framework for Graduate Teaching Assistants (GTAs). The Framework includes information about recruiting GTAs, remuneration, holiday entitlement and guidance on visa implications for international students. This document was updated in the last academic session to include further clarification and updates regarding recruitment and remuneration. The Framework also describes the training, development and support for GTAs and provides a roles and responsibilities document. The latest version of the Framework, roles and responsibilities document and the College's central register of trained GTAs can be found on the Graduate School's GTA website here:

www.imperial.ac.uk/study/pg/graduate-school/students/doctoral/professional-development/gta-programme/

International Global Fellows Programme

The Graduate School, in partnership with the International Relations Office, offers doctoral students the unique and exciting opportunity to visit leading research universities around the world as part of its International Global Fellows Programme. Due to the pandemic, the first trilateral Global Fellows Programme “AI and Healthcare” was delivered remotely, in partnership with the Technical University of Munich (TUM, Germany) and the Nanyang Technological University (NTU, Singapore).

President’s PhD Scholars

In October 2020, the Graduate School welcomed the eighth cohort of President’s PhD Scholars. The Scholars are a group of high academic achievers who have been awarded a scholarship by the College. The Graduate School has developed a series of special events and courses for these individuals to enhance their experience at the College. In December 2020, a virtual “meet and greet session” was organised for the new cohort hosted by the College President, Professor Alice P. Gast. The Graduate School also organised a Strengths-finder Workshop and a Careers Workshop entitled “Professional Development to Enhance your PhD Experience” for the new cohort.

Industry & Enterprise Programme

As part of supporting delivery of the government’s industrial strategy and with the benefit of National Productivity and Investment funding (NPIF) from the Engineering and Physical Sciences Research Council (EPSRC), the Graduate School continued to run its Industry & Enterprise Programme to connect Imperial College doctoral student talent to industry. The programme was offered through interrelated elements: short courses, retreats (plus a related entrepreneurial masterclass), internships and No-Code bootcamps. Given the on-going restrictions owing to the COVID-19 pandemic, the provision was delivered entirely online and remotely. A suite of webinars was developed for the short courses and ran four times each term: Developing an Entrepreneurial Mindset; Generating Creative Ideas (new course for 20/21); Designing Business models (new course for 20/21); and Pitching to Industry. The webinars also included real-life entrepreneur/s to provide an experiential aspect to the material being presented. Six online retreats ran across the year as one- or 2-day events, including one with an international partner (University of Vaasa), which was originally planned to be held in Finland and in -person. Three of the retreats were on the theme of AI & Data, two were on the theme of Clean Growth (including one with the University of Vaasa) and one was on the theme of MedTech (new for 20/21). Related to the retreats was a new offering for 20/21, the Entrepreneurial Masterclass designed to reflect themes and activities taking place across London Tech Week. For all these events, students were involved in a range of practical activities aimed showcase their research or related business venture. at networking and knowledge exchange, creating impact in industry from research, working on innovation and idea generation and receiving advice and developmental support through observations and feedback.

Professional Skills Training for Master's Students – The MasterClass Programme

Imperial College London is one of only a few institutions in the UK to provide a professional skills training programme for Master's students although sector interest is now building in this area. The MasterClass programme has been designed to complement academic study and courses have been scheduled to run at appropriate times throughout the academic session to fit in with programme timetables.

Unlike the doctoral professional skills programme there are no college wide minimum attendance requirements and students are free to take as many MasterClasses as they wish. Individual departments have made some elements of the MasterClass programme compulsory for their students demonstrating the value of professional skills development for Master's students.

The entire MasterClass programme ran remotely via Adobe Connect, Microsoft Teams and Zoom in the 2020-21 academic session.

Innovation Area	Course Title
MASTERING DISSERTATIONS	Writing for Master's 1: Note Taking and Examination Skills
	Writing for Master's 2: Literature Review
	Writing for Master's 3: Preparing your Dissertation
	Preparing a PhD Proposal
MASTERING PRESENTATIONS	Mastering Presentations 1: Presentation Skills
	Mastering Presentations 2: Informational Posters – Layout & Design
	Mastering Presentations 3: Public Speaking
RESEARCH EFFECTIVENESS	Research Effectiveness 1: Time Management
	Research Effectiveness 2: Research Skills & Reference Management
	Research Effectiveness 3: Creative Thinking
	Research Effectiveness 4: Research Ethics
	Research Effectiveness 5: Experimental Design
	Research Effectiveness 6: Critical Thinking
UNDERSTANDING YOURSELF AND OTHERS	Understanding Yourself and Others 1: Interpersonal Skills
	Understanding Yourself and Others 2: Myers Briggs
	Understanding Yourself and Others 3: Stress Management
	Understanding Yourself and Others 4: Negotiation Skills
	Understanding Yourself and Others 5: Leadership Skills
MOVING FORWARD	Moving Forward 1: CVs, Cover Letters and Application Forms
	Moving Forward 2: Developing your Career Through Networking
	Moving Forward 3: Interview Skills
	Moving Forward 4: Stepping Up – Master's to PhD
ONLINE COURSES	Mandatory Online Plagiarism Awareness Course
WEBINAR	Presentation Skills: An Audience Centred Approach
	Presentation Skills: Presenting your Research by Poster

Table 3: Programme of Masterclasses delivered in 2020-21

Cohort Delivery

As well as our general courses and resources, the Graduate School provides a range of Cohort Delivery bespoke provision for particular groups of students e.g. block booking a course for an entire MRes/MSc programme or specific group of Doctoral students. We are also able to deliver customised versions of existing short courses and bespoke provision in the form of residential retreats.

SECTION THREE

Supporting the student experience

Cohort Building and the Research Community Fund

Cohort building helps to enhance research culture and research environments. Cohort and research community development can also assist departments to comply with the College's Research Degree Precepts (Precept 9). The Graduate School offers two types of support, firstly dedicated professional development courses to cohorts of students and secondly funding for cohort building activities. This fund is called the Postgraduate Community Fund. As of October 2020, the fund has been open to both Master's and Doctoral students. The Graduate School's Cohort Building Coordinator, Dr Caroline Hargreaves (caroline.hargreaves@imperial.ac.uk) is available to provide advice to students and staff on developing cohort provision.

From 28th of September 2020 – 30th of June 2021, the Graduate School received 13 cohort building applications and approved funding for all of these activities. Following the College closure and Government regulations around social distancing due to the pandemic, students were encouraged to submit applications for remote/online events or activities.

Examples of funded cohort activities are available to view on the cohort building website or via the Graduate School's blog (all successful applicants must submit a blog post following their event, as a condition of funding). Activities included networking and information sharing events for students, podcasts, virtual careers events and symposiums as well as a virtual Pilates class. The Graduate School also facilitated and taught numerous dedicated professional development courses for cohorts of students within Departments.



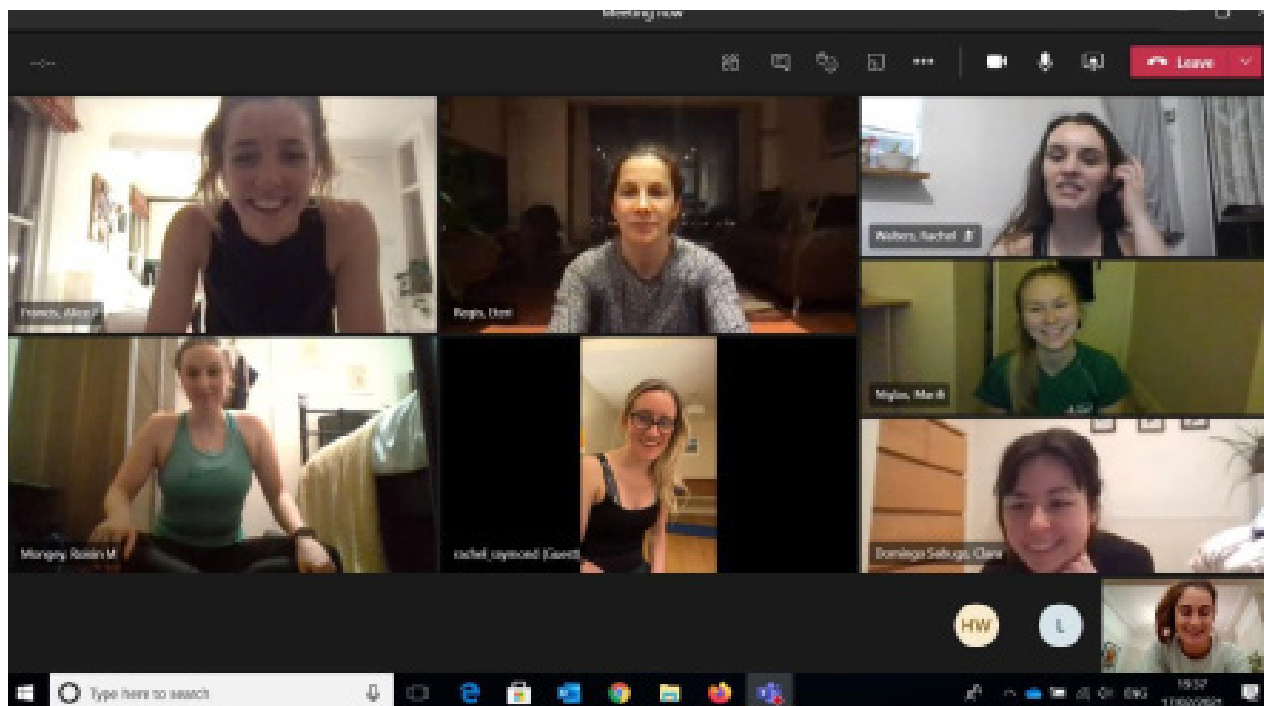


Fig. 3 - A screenshot of students from NHLI enjoying an online Pilates class!

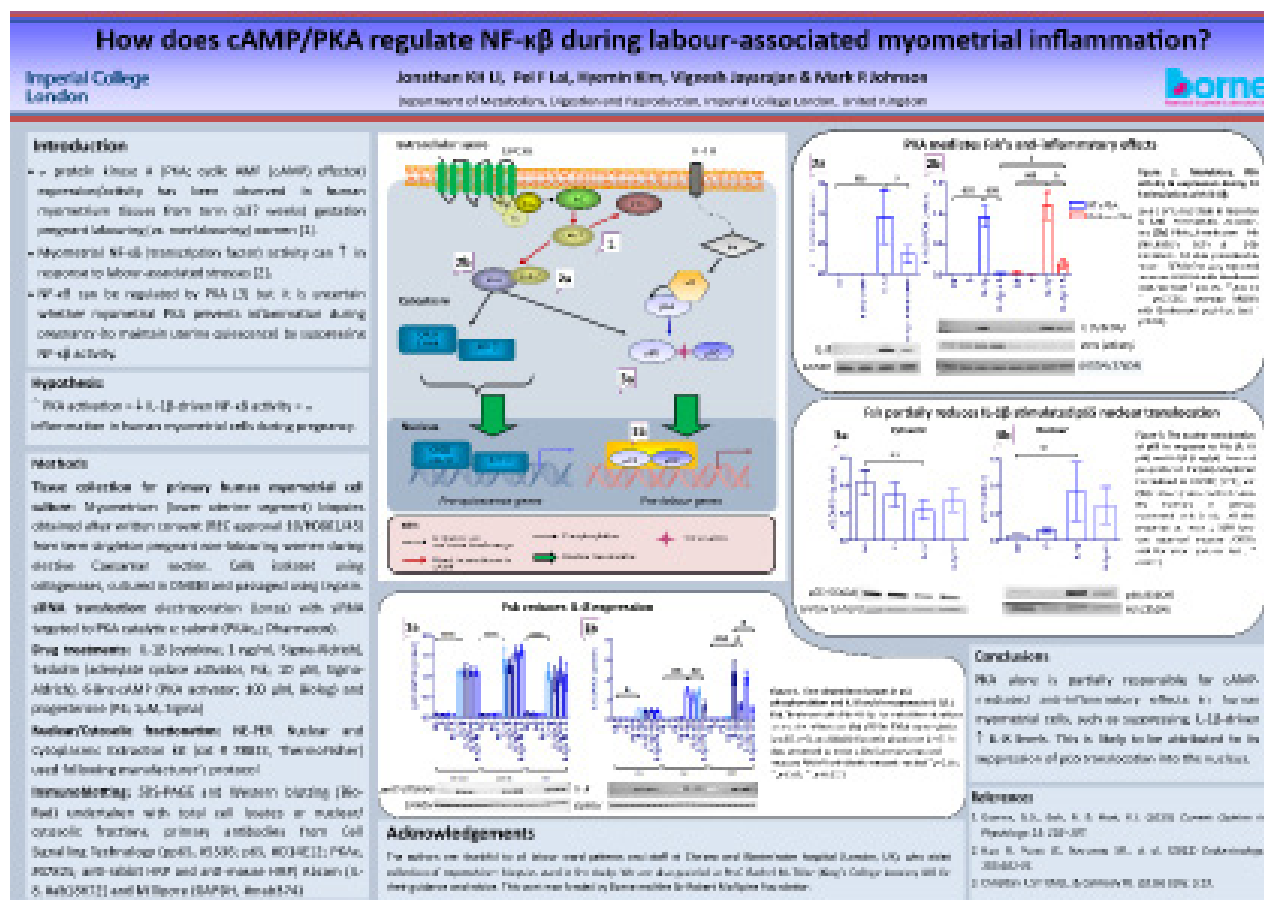


Fig. 4- Jonathon Li's prize-winning poster from the Faculty of Medicine's Rising Scientist Day



Fig. 5 - The poster from the MRC centre for environment and health's sustainability workshop

Coaching

The Graduate School's postgraduate student coaching programme was established to provide students with an opportunity to talk, independently from their academic department, about challenges they may be experiencing as they study for their postgrad qualification. Although the Graduate School's coaching programme primarily focuses on building effective working relationships, it is recognised that there may be other self-development issues that students might like to explore with a coach.

More information is available at:

<https://www.imperial.ac.uk/study/pg/graduate-school/community-support/coaching/>

PG Rep Training

The Postgraduate Rep Training Framework is designed to help students who become Postgraduate Representative develop in their role. The training framework consists of a package of development opportunities to: enhance a PG Reps ability to represent and work better with others in meetings and departments; negotiate assertively, and to understand systems at College including Staff-Student Committee meetings.

PG Representatives, Academic Staff, Faculties, Students' Union, Graduate Students' Union and the Graduate School have worked in partnership to design the provision which is on offer, to ensure that it is useful and relevant to this particular group of students.

Courses on offer as part of this provision are as follows,

- Assertiveness for Postgraduate Representatives
- Chairing Meetings for Postgraduate Representatives
- Understanding UK Higher Education Landscape and Policy (Webinar)
- Negotiation Skills for Postgraduate Representatives
- Postgraduate Well-being: Help your Peers

Students as Partners: The Student Programme Partner Initiative

The Students as Partners initiative gives Doctoral students from across the College the opportunity to engage with our Professional Development Programme and shape its design and delivery.

The professional Skills Development programme is split in to ten distinct areas, each of which has a Graduate School Programme Leader who works in partnership with a Student Programme Partner. As such, ten Student Programme Partner (SPP), opportunities were advertised (one for each of the nine doctoral programme areas and one for the Master's programme),

- Master's Programme
- Professional Progression
- Research Communication
- Research Impact and Societal Engagement
- Industry and Enterprise
- Research Computing Skills
- Graduate Teaching Assistant Programme
- Professional Effectiveness
- Research Integrity
- Professional Business Skills

Student Programme Partners are required to collaborate with the corresponding Graduate School Programme Leader. An overview of some of the types of engagement undertaken is as follows,

- Assisting with co-commissioning of the programme
- Assisting with co-design of courses
- Where appropriate, contributing towards the co-delivery of workshops
- Assisting with co-assessing the outcome of the annual programme review

More information about the scheme can be found at the following:

www.imperial.ac.uk/study/pg/graduate-school/students-as-partners/

SECTION FOUR

Graduate School committees and working parties

Committees

Course Quality and Strategic Development Committee (CQSD)

The CQSD has strategic oversight of all Graduate School activities, including the quality assurance of the professional skills development programmes and provision to support student wellbeing and community development. It also contributes towards the development of institution-wide projects which the Graduate School leads-on as well as the results of student surveys.

It reports to the Postgraduate Professional Development Committee and receives minutes from the School's Learning and Teaching Committee, Master's Group, Research Computing and Data Science Operations Group and the Research Computing and Data Science Steering Group.

Postgraduate Professional Development Committee (PPDC)

The PPDC is chaired by the Deputy Director of the Graduate School (Professional Development) and its remit is to have strategic oversight and to ensure the scope and content of the future development of the programme of Master's and doctoral professional development from a Faculty and internal perspective. The Committee ensures the development and provision of a balanced training programme in professional development for all postgraduate students and monitors the overall quality of programme delivery.

External Advisory Board

The external advisory board advises on the future development of the programme of master's and doctoral professional development courses from an external perspective. It has representatives from industry which come together annually to review the programme of professional development courses and to make recommendations for enhancement which are considered by the PPDC.

Centre for Doctoral Training / Doctoral Training Programme (CDT/DTP) Governance Committee

The Graduate School's CDT/DTP Governance Committee is chaired by the Deputy Director of the Graduate School. The Committee acts as a forum in which to share good practice across Research Centres as well as to coordinate the programme of support for new CDT and DTP bids and renewal applications for existing programmes and consider feedback from mid-term and annual reviews. The committee also provides oversight of and help to coordinate the additional training provided to students by these Centres in order to enhance the experience of postgraduate students on DTPs and CDTs. The value of establishing peer groups and cohorts was identified by this committee and is now one of the College's research degree precepts which Departments are assessed against.

The Graduate School is also able to gather information from this committee to inform its own training programme and to ensure that students who do not belong to a CDT or DTP are given a comparable learning experience and support. Likewise, the Graduate School shares good practice and provides training support and advice for tutors on the design and delivery of CDT/DTP run professional skills courses.

PGR Admin Network

The Graduate School hosts a termly meeting for all PGR Administrators to meet and network.

Directors of Postgraduate Studies Lunches and DPS Induction

DPS lunches continue to provide opportunity for DPSs to meet other DPSs, network, share best practice and discuss current issues relating to PGR education.

Postgraduate Admissions Network

The Postgraduate Admissions Network (PAN) provides a regular opportunity for colleagues across College with relevant responsibilities to meet to discuss best practice and share ideas relating to postgraduate recruitment and admissions. The PAN is chaired by the Deputy Director of the Graduate School and meets roughly each academic term. Themes for discussion in the last year included:

- introducing a College-wide closing date for PGT applications
- Postgraduate application system (as part of SIMP)
- academic and English language entry requirements and support
- academic offer conditions
- the postgraduate student prospectus
- information presented to applicants on the College's website, taking account of CMA legislation
- Postgraduate scholarships

SECTION FIVE

EXTERNAL COMMITTEES AND ALLIANCES

Professional Body Accreditation

The Graduate School continues to work with professional bodies to align provision with professional body continuing professional development programmes. Graduate School courses have been accredited and contribute towards Membership and Chartered Status for the Royal Society of Chemistry (RSC), Royal Society of Biology (RSB) and the Institute of Physics (IoP). Furthermore, Masters Students and early-stage doctoral researchers may apply for Registered Scientist status.

SECTION SIX

GRADUATE SCHOOL EVENTS

Welcome & Induction Events

The Graduate School developed online welcome and induction site for Doctoral and Master's students, to ensure that new students were given the relevant information about what the Graduate School has to offer and its role within College, why the Professional Development is important, as well as information about the College attendance requirement for doctoral students. The sites also give new students a brief introduction to the other areas of support on offer via the Graduate School, including information about coaching, events and cohort building and signposts key College information.

4Cs Science Communication Competition

The 4Cs Science Communication Competition took place via MS Teams in April 2020. Twelve students from across the College were shortlisted and gave three-minute presentations to the audience and panel of judges to try to win first prize.

The aim of the 4Cs competition is to provide postgraduate students from all disciplines across the College with the chance to develop their presentation and communication skills. The event has been designed to ensure that all those entering are supported and are given the opportunity to develop in their endeavour to effectively explain their research in language appropriate to a non-specialist audience. The competition allows for Creativity, Content, Clarity and Charisma (the 4 'C's'), in communicating science and research.

The winners were as follows:

- 1st Place - Lloyd Zheng, Department of Material
- 2nd Place - Emily Tsang, Department of Life Sciences
- 3rd Place (joint winners) - Chiara Pojani, Institute of Clinical Science & Kim Owen, Department of Life Sciences
- People's Choice Award Winner - Camilla Cucinotta, Department of Immunology and Inflammation

To read the entries, visit: www.imperial.ac.uk/study/pg/graduate-school/events/4cs/

Science Writing Competition

The Graduate School's Science Writing Competition gives postgraduate students from all disciplines across the College the chance to develop their writing skills and use their creativity to expound upon a scientific subject of their choice. Students are asked to submit a written article of no more than 500 words. The writing can take on any form, but the piece must be original, solely the work of the author and not published anywhere else in any format. Winners of the writing competition are announced via the Graduate School's Twitter feed and the final prize-winning articles published on the Graduate School's blog.

- 1st Place - Anjali Wijnhoven, MSc Student, School of Public Health
- 2nd Place - Federica Raguseo, PhD Student, Chemistry
- 3rd Place - Alice Brown, PhD Student, Institute of Clinical Sciences
- People's Choice Award - Kanya Alifa, MSc Student, Chemical Engineering

Master's Wellbeing Guest Lecture for Master's Students

During the pandemic, it was recognised that work and home-life had become inextricably linked, leading to unique challenges in achieving balance and in self-care. On top of this, the stressors and strains of living through a global pandemic led to isolation, uncertainty, burnout, as well as worries about families, children, health, and futures. As such, an interactive presentation for Master's students, by guest lecturer Dr Cindy Veldhwe, from the University of Columbia, talked about some of these stressors and gave some practical tips to try to help students navigate their way through whilst remaining as productive as possible.

The event took place via MS Teams on Wednesday 31st of March 2021.

PhD Summer Showcase

Due to the Covid-19 Pandemic, the 2020-21 PhD Summer Showcase ran as a virtual event for the second year in a row. The challenge for students was to communicate their research to a lay audience via a 3-minute video presentation. The team of judges assessed each presentation for its visual impact and content as well as the ability of the presenter to explain their research in a way that could be shared with the general public.

The following prizes were awarded:

- 1st Prize - Francesca Lugaresi (Mechanical Engineering)
- 2nd Prize - Theo Hembury (Life Sciences)
- 3rd Prize - Laura Mereweather (Immunology and Inflammation)
- People's Choice Prize - Nagina Mangal (Surgery and Cancer)

SECTION SEVEN

LISTENING TO STUDENTS

Student Evaluation and Focus Groups

All students are asked to evaluate the Graduate School's professional skills training courses via online internal student evaluation forms. The feedback received is reviewed by the Graduate School to ensure continual enhancement of the programme. Issues raised by students are also brought to the attention of the of the CQSD and the PPDC. Students are also invited to participate in external student surveys such as the Postgraduate Research Experience Survey (PRES), the Postgraduate Taught Experience Survey (PTES) and the Student Experience Survey, the results of which are carefully considered by the Graduate School and where appropriate.

The Imperial College Union and the Graduate Students' Union

The Graduate School also works and supports the Imperial College Union and the Graduate Students' Union to improve mechanisms of feedback and representation at College and has established a Working Party to review and strengthen PG staff-student Committees.

PRES 2019 - Actions taken and work which will continue through 2021-22

In 2019-20, the Graduate School established a task and finish group to review the recommendations made by the Imperial College Union (ICU) in response to PRES 2019. The recommendations made by the ICU were divided into four themes; Creating Effective Student-Supervisor Partnerships, Supervisor Support and Development, Doctoral Student Wellbeing and Poor Supervision and Research Culture and Environment. Work in this area continued through in to 2020-21.

Creating Effective Student-Supervisor Partnerships:

- Annually, Heads of Department will host a meeting for all research degree supervisors where the Mutual Expectations for the Research Degree Student Supervisor Partnership document will be discussed.
- Departments will monitor that the mutual expectations document has been discussed by students and their supervisors between 0-3 months of the student starting at the College.
- The College will monitor that the mutual expectations document has been discussed by

- supervisors and their students through the ESA milestone.
- The mutual expectations document will be a standing agenda item at the first meeting of all PGR Staff Student Committees each year.
- Directors of Postgraduate Studies will refer to the mutual expectations document in their inductions for new PGR students
- The Graduate School and the Union will each highlight the mutual expectations document in their autumn welcome e-newsletter to new PGR students.

Supervisor Support and Development

- The Graduate School has led a College-wide review of supervisor training, development and support. As a result, a new programme of training and support has been created and will continue to be developed further during 2021-22 with a view to launching in November 2021
- As the new programme is implemented, the Graduate School will explore ways in which to measure its impact.
- Departments will be required to actively monitor the number of students per supervisor.

Doctoral Student Wellbeing and Addressing Poor Supervision

- The Graduate School's review of supervisor support and development will seek views from staff and students on how best to address cases of poor supervision. Work on this will continue through 2021/22.
- Research Degree Precept 10 will be amended to read as follows:
 - Departments must make provision for a research students pastoral care network, led and managed by an appropriate member of staff within the Department. The person assigned to each student, should not be involved with the assessment of the student. Departments are free to choose which model to use, but the model should be clearly communicated to students. Examples may include, cohort building, mentoring or a buddy scheme.
- Departmental PGR Staff Student Committees will include discussion of what pastoral care network is in place at the first meeting of each academic session.
- The mutual expectations document will link to the Student Support Zone.
- Members of staff responsible for the pastoral care of students within departments should receive appropriate training and have access to College networks to support them in their role.
- The Faculties will be asked to contribute a total of £10K each year towards PGR community development. We will continue to petition for this during 2020-21, but there has been delays due to the Pandemic.

Research Culture and Environment

- The Graduate School reviewed, in consultation with the ICU, the mutual expectations document to ensure that expectations are discussed around working conditions for research students.
- In 2021-22, the Graduate School will work with CLCC and the Union to explore further opportunities to collaborate on professional development opportunities for research students.

SECTION EIGHT

FRANCIS CRICK PARTNERSHIP

The Crick PhD Programme

The Francis Crick Institute is a partnership between Imperial College London (Imperial), King's College London (KCL), University College London (UCL), Cancer Research UK and the Medical Research Council. The partners have been working together to develop a CRICK PhD programme, the first cohort of which arrived in September 2014. CRICK students can make use of the facilities, in particular those of the Graduate School, at any of the HEIs involved in the partnership. The Graduate School has taken the lead administrative role in the management of the CRICK student experience and will continue to develop the operational processes involved in ensuring this new and exciting venture evolves smoothly. The Graduate School has also developed an online training course for Crick supervisors which is available via Blackboard.

SECTION NINE

RESEARCH AND IMPACT 2020-21

Books

Elena Forasacco has submitted the following chapter, which is due to be included in the book, *Teaching and Learning Innovations in Higher*, Libri Publishing,

- Flexible classroom design to facilitate students' learning, engagement and integration of knowledge and cultures.

Research Projects

Dr Jane-Lisa Coughlan has completed a Master's in Education research thesis on the following subject:

- MEd - Understanding entrepreneurial competencies for STEM postgraduate research student entrepreneurs

The following research projects are underway, in collaboration with other researchers from across College:

- Multi-dimensional Pal- Bell Code Development, Dr Chris Cooling
- Mindfulness vs Exercise for Stress reduction Trial for Early Career Researchers -- MEST-ECR, Dr Caroline Hargreaves

Presentations at National and International Conferences

During 2020-2021, staff from the Graduate School presented at a range of national and international conferences as follows:

Member of Team	Conference/ Event	Topic	What	When
Laura Lane & Bethan Ritchie	UK CGE Annual Conference	Students as Partners – A Year in Review	Presentation	2-3/07/2020
Helal Ahmed	Advance HE Teaching and Learning Conference 2020	Teaching in the spotlight: Creative thinking to enhance the student experience: From curriculum design to student success	Presentation	7-9/10/2020
Elena Forasacco	LiHE	Teaching and Learning Innovations in Higher Education	Chapter submitted	01/08/2020
Magdalena Jara	Researcher Education and Development Scholarship (REDS) Conference 2020	Peer learning, cases and reflection on practice: a strategy for doctoral supervisor development	Paper Presentation	15/10/2020
Elena Forasacco	UKGGE workshop “Exploring trends, challenges and good practice in the integration of technology enhanced learning (TEL) within postgraduate education”	Blending technology enhanced learning and pedagogical approaches to create remote residential courses: a case study	Presentation	27/10/2020
Elena Forasacco & Magdalena Jara	UKCGE Conference	Remote residential programmes: adapting in-person residential programmes to the pandemic era	Small group presentation	28/06 – 02/07/2021
Chris Cooling	UKCGE Conference	Tailoring Research Computing and Data Science Course Provision to Meet Postgraduate Student and Employer	Oral Presentation	28/06– 02/07/2021

Table 4: Presentations delivered in 2020-21

Further information can be found on the following webpage,

www.imperial.ac.uk/study/pg/graduate-school/impact-and-influence/research-and-development/

SECTION TEN

Statistics

Number of Professional Skills courses delivered in 2020-21

In 2020-2021, the Graduate School delivered 120 different doctoral courses. Some courses were delivered more than once, the Graduate School delivered 503 doctoral course sessions in total.

In 2020-2021, 29 different MasterClasses were delivered with an additional course available online. Some courses were delivered more than once, the Graduate School delivered a total of 123 MasterClasses.

Due to the Covid-19 pandemic, all courses delivered in the 2020-21 academic year were done so remotely. It should be noted that some face-to-face teaching is set to resume in the 2021-2022 academic year

Figure 6 compares the number of courses delivered by the Graduate School in 2020-21 with the previous seven academic sessions. The total number of courses delivered by the Graduate School in 2020-21 was 626. In 2019-20 the total number was 505. In 2020-21, the Graduate School, despite the pandemic, therefore delivered 121 more courses than in the previous year, an increase of 24%.

Not including the online courses, the Faculty of Engineering (FoE) had 3,495 Doctoral student

NUMBER OF GRADUATE SCHOOL COURSES DELIVERED SINCE 2013-14

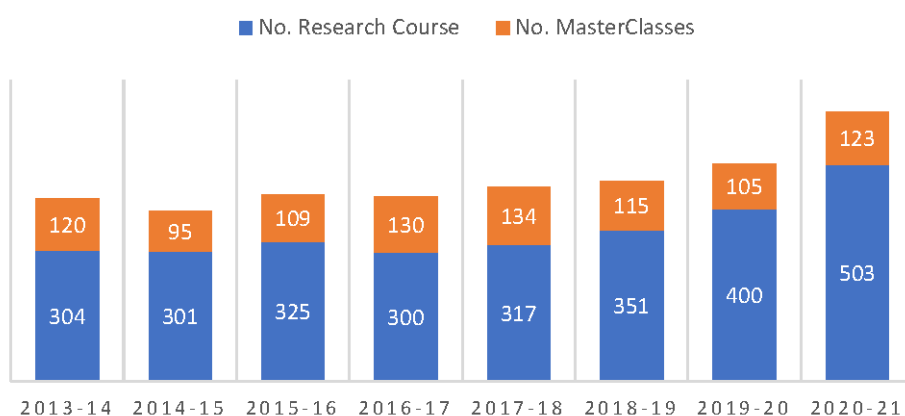


Fig. 6: The total number of Graduate School doctoral courses and Masterclasses delivered during the previous seven academic sessions

ATTENDANCE STATISTICS

There were 11,207 student attendances at Graduate School courses during 2020-21. 7,816 of these were student attendances at doctoral professional skills courses and 3391 were student attendances at MasterClasses. An additional 462 students (241 doctoral, 221 Master’s) completed accredited online courses, taking the total to 11,669. The previous year’s total was 9390; an increase of 19% in student attendance.

STUDENT ATTENDANCES AT GRADUATE SCHOOL COURSES SINCE 2013-14

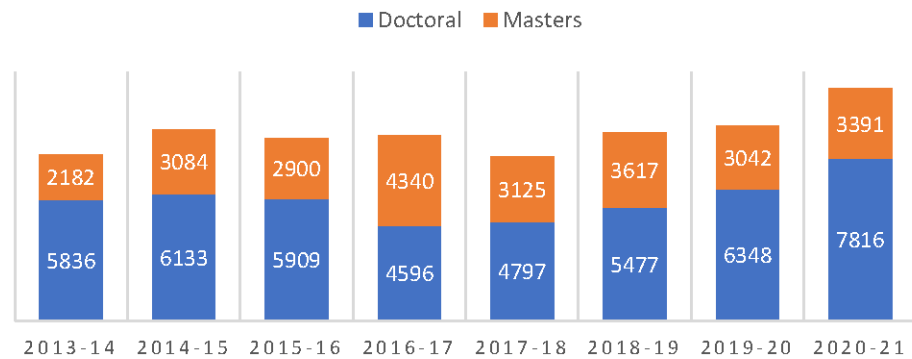
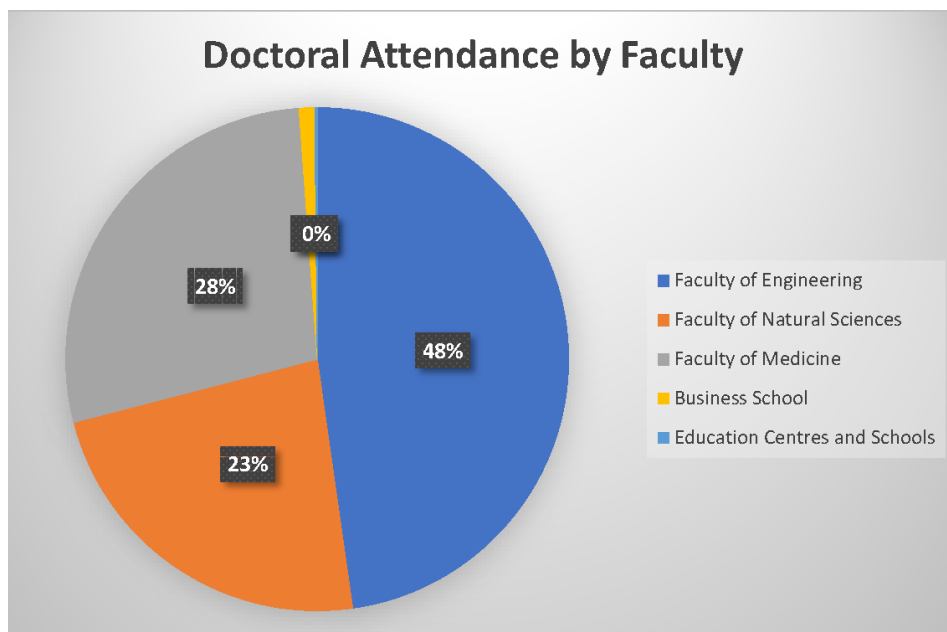
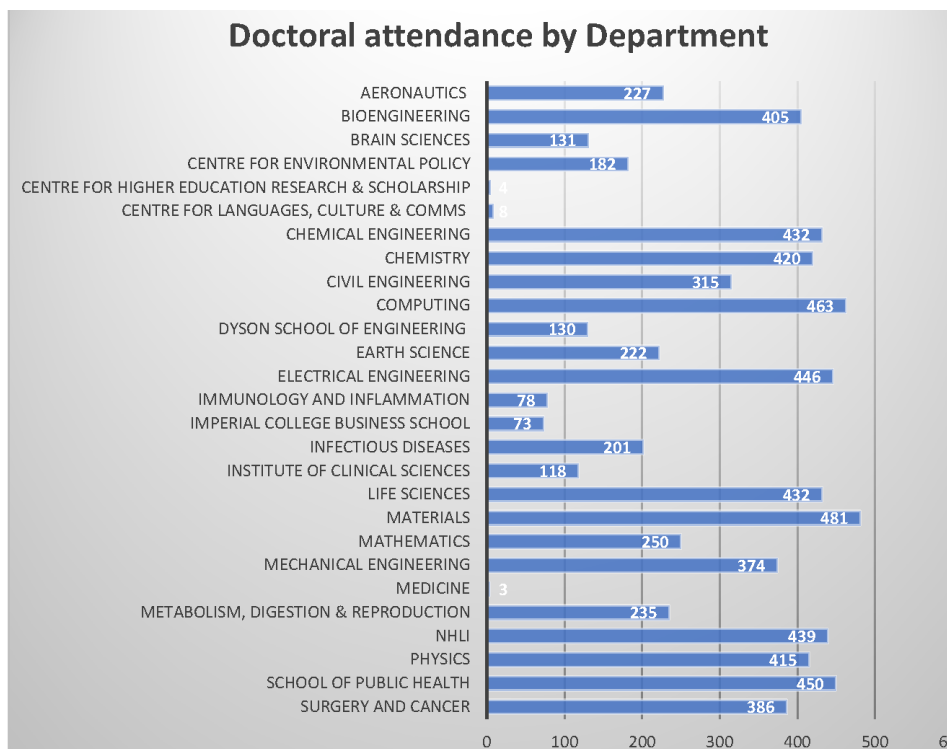


Fig. 7: The number of doctoral and MasterClass student attendances since 2016-17

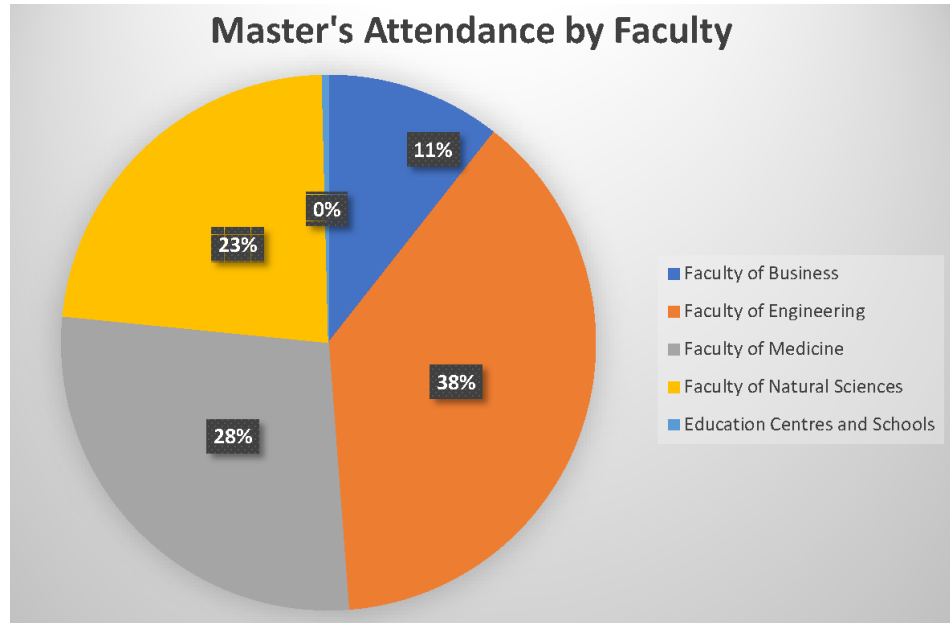
Not including the online courses, the Faculty of Engineering (FoE) had 3,495 Doctoral student attendances; the Faculty of Natural Sciences (FoNS) had 1,699; the Faculty of Medicine (FoM) had 2,041; the Imperial College Business School had 73; the Centre for Communication, Languages and Culture and the Educational Centres and Schools had 12.



Figs. 8 & 9: The number of student attendances at Doctoral courses during 2020-21 by Faculty and by department.



Not including the online courses, the Faculty of Engineering (FoE) had 3,495 Doctoral student attendances; the Faculty of Natural Sciences (FoNS) had 1,699; the Faculty of Medicine (FoM) had 2,041; the Imperial College Business School had 73; the Centre for Communication, Languages and Culture and the Educational Centres and Schools had 12.



Figs. 10 & 11: The number of student attendances at MasterClasses during 2020-21 by Faculty and by Department.

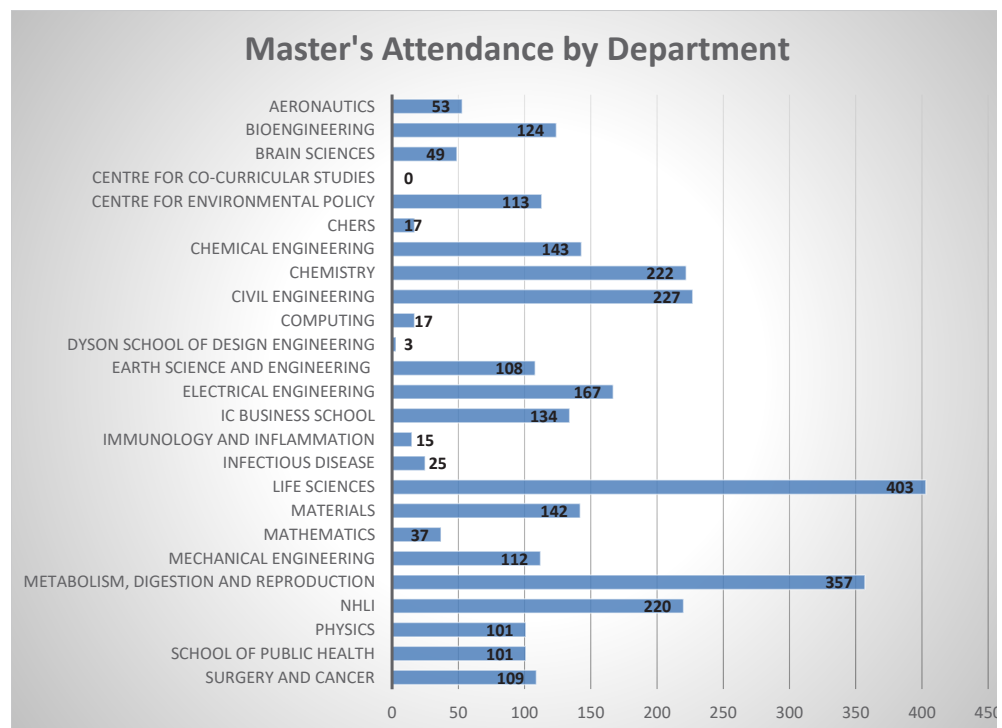


Figure 12 details the courses doctoral students attended in the respective course programmes. The Research Computing and Data Science programme was by far the most attended programme. Every course had an increase in attendance in comparison to the previous year. The Professional Business Skills programme had the lowest attendance.

Figure 13 details the courses Master’s students attended in the respective course programmes. Attendances were more evenly spread in the Master’s programme, with Research Effectiveness and Moving Forward the most highly attended. Research Effectiveness and Moving Forward had the highest increases in attendance compared to last year.

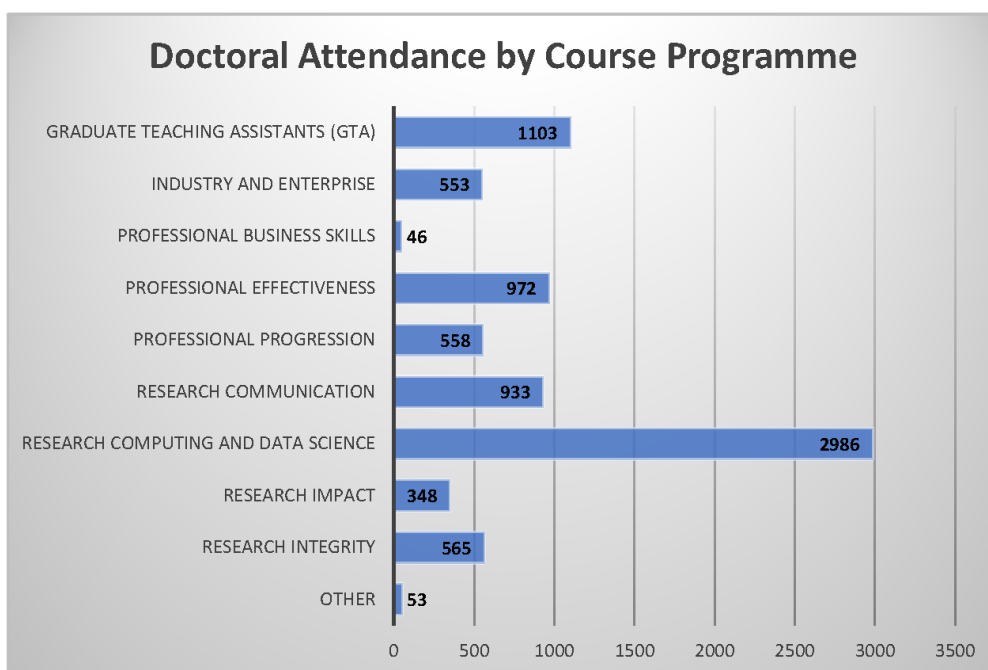


Fig. 12

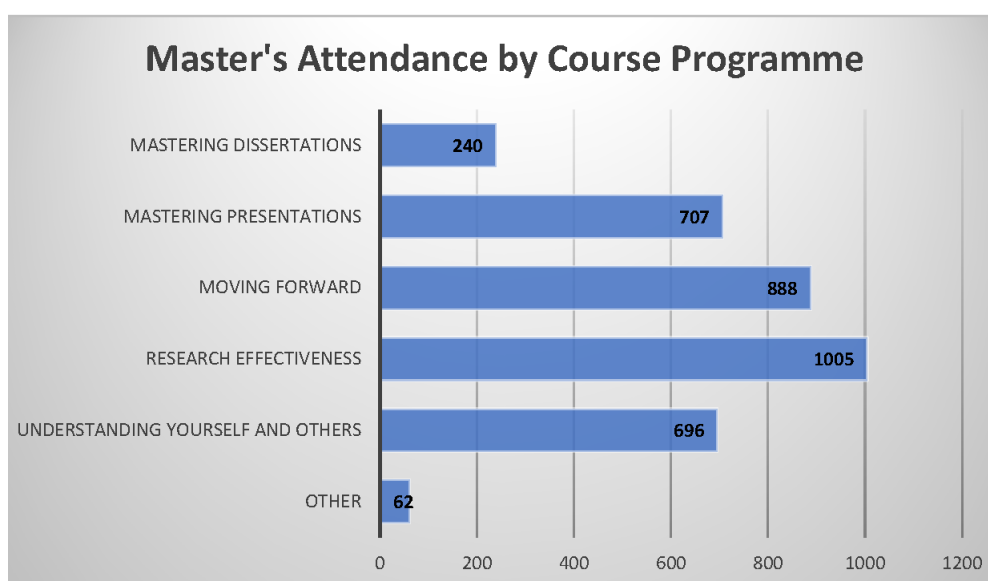



Fig. 13


SECTION ELEVEN

THANKS TO OUR COLLABORATORS

The Graduate School extends its thanks to members of academic staff, the Careers Service, the Centre for Academic English, Societal Engagement Office and the International Relations Office who have supported the delivery of Graduate School courses. Thanks are also extended to the EDU and the Library for their ongoing support and assistance in the delivery of the professional skills programme.

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