

The Loughborough Doctoral Experience

An introduction to postgraduate research at Loughborough University



LOUGHBOROUGH DOCTORAL COLLEGE WELCOME



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To find out more about Loughborough University's research opportunities, the benefits of doctoral study and what you can expect as a student at Loughborough, please visit: https://linearchy.org/length/benefits/ or doctoral study and what you can expect as a student at Loughborough, please visit: https://linearchy.org/length/benefits/ or doctoral study and what you can expect as a student at Loughborough, please visit: https://linearchy.org/length/benefits/ or doctoral study and what you can expect as a student at Loughborough, please visit: https://linearchy.org/length/benefits/ or doctoral study and what you can expect as a student at Loughborough, please visit: https://linearchy.org/length/benefits/ or doctoral study and what you can expect as a student at Loughborough, please visit: https://linearchy.org/length/benefits/<a href="https://l

For a list of our current research opportunities, please see: lboro.ac.uk/phd-opportunities

Welcome from Loughborough Doctoral College

Loughborough University's research contributes to new knowledge and understanding at the very highest levels. We help businesses and industry to compete more effectively, shape public policy and ultimately, help to improve the quality of people's lives.

All doctoral researchers at Loughborough University are welcomed into the Doctoral College, where the vitality, visibility and value of our students is at the heart of our doctoral experience. You will benefit from our extensive doctoral training programme, alongside our suite of activities designed to provide practical and pastoral support at every stage of the research process. We also link with other specialist support services across the University, such as our Careers Network, to enable you to access help and advice in order to realise your ambitions.

This booklet has been designed to tell you more about the Doctoral College and how we aim to support your doctoral experience.

Professor Elizabeth Peel Associate Pro-Vice-Chancellor (Doctoral College)



Our research degrees

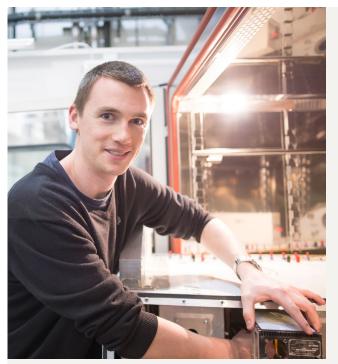
Our PhDs and EngDs give you the flexibility and freedom to carry out original quality research, whilst supporting you to solve real world problems.

Degree	Duration	Key fact
PhD	3 years full-time (6 years part-time)	The highest academic qualification you can attain. Your research must make a significant original contribution to, and show a critical appreciation of, existing knowledge in the subject.
EngD	4 years full-time	Available in some areas of engineering or applied science. An EngD involves collaboration with industry and combines formally assessed taught modules with innovative research related to real industrial problems.
PhD by Practice	3 years full-time* (6 years part-time)	Available in the areas of Architecture, Design and Creative Arts, and Social Sciences and Humanities, a PhD by Practice accommodates the communication of knowledge that may not be best represented and communicated in written form, allowing innovative practices of research and representation.
PhD in Creative Writing	3 years full-time (6 years part-time)	The PhD in Creative Writing addresses an overarching research question through academic research and a creative component. This could be a cycle of poems, a novel, a section of a novel, a novella, a play script, or a collection of short stories.

^{*}Not available in all areas

"Loughborough University to me is the epitome of hard work. From the department staff and researchers to the students – everyone strives to be the best. It felt inspiring to be a part of such a machine making waves throughout the research community."

Chris PhD Physics



"What I enjoy most about studying for a PhD is the amount you get to learn each day. Whether teaching undergraduate students, learning to use new software, running experiments or speaking with experts in your field at conferences or meetings with industry – almost every day you stumble across new information which answers questions you previously hadn't thought to ask."

Andy
PhD Aeronautical and Automotive
Engineering

Why do a doctorate?

At Loughborough, we are looking for doctoral researchers who have active, enquiring minds and are enthusiastic about becoming a world expert in their chosen field to solve vital real world issues. Studying for a doctorate offers a unique opportunity for self-discovery and personal growth but you will need to be flexible, resilient, tenacious and hard-working.

In return, you will develop expert knowledge in your chosen area and gain a wide range of invaluable skills to enhance your employability and advance your career, whether this be within academia, industry or elsewhere. With strong industry links, we regularly host careers events and offer networking and placement opportunities across a range of sectors. In addition, we invite pioneering international scholars to our Institute of Advanced

Studies to promote an outstanding, interdisciplinary research environment to ensure your work is informed by the latest developments, insights and discoveries.

As part of our vibrant research community, you will have the support of the Doctoral College who will help you every step of the way to achieving your goals, so that one day you can inspire others to follow in your steps.

!boro.ac.uk/why-study-phd

The PhD process

A research degree programme can take on a variety of forms but a typical PhD might look like this:



DEVELOP YOUR RESEARCH OUESTION

Your question guides your research and keeps you on track. Ensure it is in a subject that you are really interested in and are enthusiastic about.

When you have an idea, do some preliminary research to see what information is already available; this may generate some more questions in your mind, which you can develop into your research question. The question should have clarity and be neither too broad nor too narrow.

It is key to speak with your supervisors about your idea, so that you can establish early on whether it has potential to form the basis of your research project. 2

REVIEW EXISTING RESEARCH

Undertaking a review of the existing research and literature in your field is a key step in the PhD process.

In critiquing existing knowledge, you will develop a deeper understanding of the topic and identify how your research will contribute to the subject.

4

WRITE UP

A PhD thesis is a document you will write, in the region of 80,000 words (or the equivalent). Your thesis presents your analysis of the research you have undertaken and how this answers your original research question.



3

CONDUCT YOUR RESEARCH

Different research projects will require different research activities. You will use primary and secondary sources and may undertake fieldwork, interviews, surveys, observations etc.

You will need to establish what information you want to collect, how you will collect it, how you will analyse the data and ultimately, how you will present the data in your thesis.



UNIVERSITY ROAD

THE VIVA

The viva voce is an oral examination which requires you to discuss your research with your examiners, who will have reviewed your thesis. The examiners will ask a series of questions and develop a discussion to test your knowledge and ability to defend your research.



GRADUATE!

Once you have passed your viva and submitted a final, corrected version of your thesis, you can graduate as a Doctor of Philosophy. Not only does this allow you to put the title "Dr" at the start of your name, it also opens up a world of opportunities in research, academia, industry and many other sectors.



*We offer a free coach service from Heathrow to our Loughborough (East Midlands) campus for new international students at the start of the academic year.



Our research strengths

Research strengths in engineering and science

Loughborough has over 750 doctoral students working on engineering and science research projects, providing world-leading solutions to current and future global challenges. A selection of our research strengths in the engineering and science disciplines are listed by school.

School of Aeronautical, Automotive, Chemical and Materials Engineering

Collaborations with key industrial companies and research councils ensures research across the School is well-funded. Our industry and sponsor networks provide opportunities to present your research and develop contacts that often lead to future career opportunities. Specific areas of growth include:

- bioengineering and healthcare
- connected and autonomous transportation
- energy and environment
- low and zero carbon propulsion
- materials
- simulation and modelling

Find out more:

Aeronautical and Automotive Engineering:

lboro.ac.uk/aae/research

Chemical Engineering:

lboro.ac.uk/chemical/research

Materials:

lboro.ac.uk/materials/research

School of Architecture, Building and Civil Engineering

As a leading centre for transdisciplinary research in the built environment, many of our research outputs are created for, and in partnership with, industrial collaborators to ensure demonstrable impacts on policy and practice worldwide. Our research strengths are recognised through our seven research groups:

- architecture
- building energy
- · construction management
- geotechnics and geomatics
- structures and materialstransport and urban planning
- water engineering

lboro.ac.uk/abce/research

School of Design and Creative Arts

Desig

Through our research programmes, we aim to discover, explore and develop new ideas, concepts, methods, tools, services and products that contribute to a healthier, safer, more productive, sustainable and equitable world. Our key areas of design research are:

- safety
- human factors
- · digital design and fabrication
- experience design
- responsible design

lboro.ac.uk/design/research

Wolfson School of Mechanical, Electrical and Manufacturing Engineering

Ranked 1st in the world for sports-related subjects and in the top 100 for mechanical, aeronautical and manufacturing engineering (QS World University Rankings by Subject 2020), the School has over 100 academics and 200 research students who deliver world-leading engineering solutions in:

- communications
- · control and automation
- dynamics and thermofluids
- · energy and power
- high value manufacturing
- materials and measurement
- systems

lboro.ac.uk/meme/research

School of Science

Loughborough scientists are actively engaged in cutting edge theoretical and applied research, shaping the future and transforming the world through technological advances and scientific discovery. Boasting excellent facilities including state-of-the-art laboratories, we offer a rich array of opportunities to pursue impactful research. Split into five science disciplines, the major research strengths are listed below:

Chemistry

- energy
- markers and detection
- catalysis and functional molecules
- crime and security
- · chemical process technologies

lboro.ac.uk/chemistrv/research

Computer Science

- vision
- artificial intelligence
- autonomous and human-centred systems
- · networks and systems
- theoretical computer science

lboro.ac.uk/compsci/research

Mathematical Sciences

- analysis and partial differential equations
- dynamical systems
- geometry and mathematical physics
- linear and nonlinear waves
- mathematical modelling
- statistics
- stochastic analysis

lboro.ac.uk/maths/research

Mathematics Education

- mathematical cognition
- education design and evaluation
- higher education pedagogy

lboro.ac.uk/mec/research

Physics

- novel materials
- quantum and nano-engineering and design
- high frequency solid state physics and engineering
- physics of complexity

lboro.ac.uk/physics/research

OUR RESEARCH STRENGTHS OUR RESEARCH STRENGTHS

Research strengths in sport, business, arts, social sciences and humanities

Over 500 Loughborough research students across our two campuses are currently completing PhDs in the areas of sport, business, arts, social sciences and humanities, developing expertise that will contribute to solving real world problems. Key research strengths are listed by school.







School of Sport, Exercise and Health Sciences

Ranked 1st in the UK for the overall quality of our research, with 100% rated 'world-leading' or 'internationally excellent' (REF 2014), our research is split into three broad themes: sport performance, lifestyle for health and wellbeing, and participation in sport and exercise. Our diverse research portfolio is delivered by world-renowned academic staff in key areas such as:

- · sports medicine
- molecular biology
- · epidemiology
- nutrition
- physiology and biomechanics
- economics
- coaching
- pedagogy
- gender diversity
- disability sport
- psychology
- sociology
- · sport management

lboro.ac.uk/ssehs/research

School of Business and Economics

World-leading research conducted in the School has mapped the next generation of insurance services, improved the development of green supply chains, and harnessed decision science to promote active ageing. Research strengths are organised around our seven academic groups:

- · accounting and finance
- economics
- work and organisation
- · information management
- international business, strategy and innovation
- management science and operations
- marketing and retailing

lboro.ac.uk/sbe/research

Loughborough University London

As an integral part of one of the UK's top research-led universities, Loughborough University London brings benefits to local and international communities through applied research and sociocultural, interdisciplinary thinking. Research is organised around our institutes:

- Design Innovation
- · Digital Technology
- Diplomacy and International Governance
- Innovation and Entrepreneurship
- International Management
- Media and Creative Industries
- Sport Business

lborolondon.ac.uk/research

School of Design and Creative Arts

Creative Arts

Our research projects can be purely theoretical or a practice-led interrogation of creative processes and their outcomes. We encourage projects with the potential to make a substantive contribution to the academic, social and economic impact of our research. Key research areas include:

- applied storvtelling
- fine art
- graphic design
- textiles

lboro.ac.uk/aed/research

School of Social Sciences and Humanities

The School, which encompasses geography, international relations, politics and history, communication and media, social and policy studies, and English, has eight areas of research activity at its heart:

- · art history and visual culture
- · communication and culture
- · democracy, crisis and security
- environmental processes and management
- families, young people and children
- · genders and identities
- · migration, identities and governance
- textual editing and interpretation

lboro.ac.uk/ssh/research

Our doctoral community

See what some of our doctoral researchers from our Loughborough and London campuses have to say about their experiences of studying with us



"I am proud of the numerous opportunities that Loughborough has offered me from tuition fee scholarships and travel grants for international exchange programmes, through to the extracurricular activities on offer – there are a wide range of opportunities to get involved with and I am able to find my own kind of fun and social space."

Chidinma PhD Geography and Environment



"The thing I enjoy the most about studying a PhD here is the community – we meet up every week in our research groups within the department, we regularly have social events together and there's always something happening to bring postgraduate researchers from across the University together. There's never any feeling of isolation here."

OUR DOCTORAL COMMUNITY

Jack
PhD Communication and Media



"Loughborough University London is an immense source of opportunities. I have been provided with the tools, skills and professional networks in order to pursue a successful career in academia and industry."

Federico PhD Design Innovation





"At Loughborough University London, I really loved being based on the Olympic Park and taking part in everything. I made the most out of my experience and I established several collaborations at Here East, too. I am so grateful for this experience and it was always so amazing being based around such innovative practices, people and inspirational projects."

Adaku Jennifer
PhD Innovation and Entrepreneurship





lborolondon.ac.uk/doctoral-researchers







Development opportunities

Doctoral researchers at Loughborough are expected to engage in wider developmental activities beyond the focused scope of their specific research topic. The ultimate goal of this is to create well-rounded, resilient and employable researchers.

Developmental opportunities include:

- formal training workshops and courses delivered through the Doctoral College by Professional Services staff
- University-wide events, such as the annual Research Conference and the Summer Showcase, where researchers may give a short presentation or display a poster about their research
- school or department events, such as a seminar series or journal club
- engagement with international research leaders through the Institute of Advanced Studies events and bespoke workshops for doctoral researchers
- placement opportunities with external partners.

All development opportunities are mapped directly onto the Researcher Development Framework (RDF) developed by Vitae (the UK's national organisation for researcher development).

Our Careers Network also provides support to doctoral researchers. Whether your aim is to work in academia or industry, our careers consultants can help to identify your options and provide practical advice and guidance on how best to market your knowledge, skills and abilities.

There are also less formal opportunities to meet and network with other researchers. For example, Café Academique sessions give doctoral researchers a chance to share and discuss their research in a relaxed setting, whilst the PhD Social and Support Network runs a weekly lunchtime drop-in event that is open to all doctoral researchers, along with other social activities.

Accommodation

Whether you study in Loughborough or London, on or off campus, we are here to help you find a safe, comfortable and affordable home for the duration of your studies.

Living in Loughborough

We have four self-catered halls of residence available to our postgraduate students, located on campus or close by. Rooms are let on a 50-week basis and are competitively priced.

- John Phillips is situated in the student village on campus and is exclusively for postgraduates.
- Forest Court is on the edge of the town centre and is rented predominantly to postgraduates.
- Harry French accommodates a mix of students, with three houses reserved for postgraduates (one of which offers two-bedroom flats for small families).
- Falkner Eggington is our largest selfcatered hall on campus with a unique mix of ages and cultures.

Short-term lets

We offer several options for short stay accommodation on campus, ranging from a room in our dedicated visitor accommodation in University Lodge to visitor flats, houses, and rooms in our halls of residence.

Privately owned accommodation

Our Student Accommodation Centre advertises a wide selection of privately owned accommodation in Loughborough. Suitable for single occupants, couples and families, these properties have been inspected and approved by us.

loughboroughstudentpad.co.uk

Student Accommodation Centre +44 (0)1509 274488 sac@lboro.ac.uk

!boro.ac.uk/pg-accommodation



Living in London

We work closely with a number of experienced, reputable organisations to provide you with high-quality accommodation, including shared housing and self-contained apartments and houses. Our recommended providers can source housing for single students, couples and students with families.

Student.com

Designed to help you find your home away from home, student.com offers a wide range of rooms that are built and managed specifically for students. They provide a variety of accommodation types and contract lengths to enable you to find the right home. The website has a global team of booking experts who speak 12 languages and provide 24-hour online support alongside a price match promise.

!boro.ac.uk/dc-training

FEES AND FUNDING FEES AND FUNDING

Fees and funding

School/department/institute	UK/EU fee (2020/21)	International fee (2020/21)	UK fee (2021/22)	International fee (2021/22)
Aeronautical and Automotive Engineering	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Architecture (Practice-based)	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Architecture, Building and Civil Engineering	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Business and Economics	£4,407	£17,200	To be confirmed by UKRI*	£18,100
Chemical Engineering	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Chemistry	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Communication and Media	£4,407	£17,200	To be confirmed by UKRI*	£18,100
Computer Science	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Creative Arts	£4,407	£17,200	To be confirmed by UKRI*	£18,100
Design	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Design Innovation	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Digital Technologies	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Diplomacy and International Governance	£4,407	£17,200	To be confirmed by UKRI*	£18,100
English	£4,407	£17,200	To be confirmed by UKRI*	£18,100
Geography and Environment	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Innovation and Entrepreneurship	£4,407	£17,200	To be confirmed by UKRI*	£18,100
Information Management	£4,407	£17,200	To be confirmed by UKRI*	£18,100
International Relations, Politics and History	£4,407	£17,200	To be confirmed by UKRI*	£18,100
Materials	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Mathematical Sciences	£4,407	£17,200	To be confirmed by UKRI*	£18,100
Mathematics Education Centre	£4,407	£17,200	To be confirmed by UKRI*	£18,100
Mechanical, Electrical and Manufacturing Engineering	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Media and Creative Industries	£4,407	£17,200	To be confirmed by UKRI*	£18,100
Physics	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Social and Policy Studies	£4,407	£17,200	To be confirmed by UKRI*	£18,100
Sport Business	£4,407	£22,350	To be confirmed by UKRI*	£24,100
Sport, Exercise and Health Sciences	£4,407	£22,350	To be confirmed by UKRI*	£24,100

^{*} Tuition fees for UK students are set by UK Research and Innovation (UKRI) and we expect these to rise from the 2020/21 fee in line with inflation. The fees for 2021/22 are likely to be available in spring 2021 and will be confirmed on our website.

The tuition fees above are for new full-time students commencing the first year of study in the specified year only. If you are starting your PhD in January, April or July 2021, your fees will be at the 2020/21 rate. October 2021 and January, April and July 2022 start dates will be subject to the 2021/22 rate. Fees are reviewed annually and are likely to increase to take into account inflationary pressures. Part-time fees are charged at 50% of the full-time fee. If you are an international student considering part-time study, please contact pgresearch@lboro.ac.uk to discuss your eligibility.

Start dates

There are four available start dates for postgraduate research courses during the academic year:

1 January, 1 April, 1 July, 1 October.

University studentships

Our studentships typically cover the full cost of fees and may also include a tax-free stipend for living costs. In some cases, additional funding will be provided for research support expenses.

Loughborough Alumni Bursary

We are proud to offer 20% towards the full cost of tuition fees for self-funding postgraduate research students who obtained their previous degree from Loughborough University or Loughborough University London. Students must not be in receipt of any other award.

Other sources of funding

A large number of independent organisations, charities and trusts support postgraduate research in a variety of areas. UK Research Councils offer a number of studentships and grants for doctoral study, which often include the cost of fees and a generous stipend. These studentships are advertised on our website.

International funding

International students may be eligible for funding from grant awarding bodies in their own country, such as the Ministry or Department of Education. The British Council also manage a small number of international grants that may be available to you.

UK Government doctoral loans

The UK Government has introduced new doctoral loans of up to £26,445 for PhDs and equivalent postgraduate research programmes. The loan is suitable for full and part-time postgraduate research students undertaking programmes lasting up to eight years. For eligibility information, please see our website.

Find out more:

lboro.ac.uk/pg-research-funding

undertake. Some advertised projects

also require these and will state this

on the listing. General advice on what

to include in your research proposal

can be found on our website but

as requirements can differ across subject areas, it's really important that

you discuss this with your potential supervisor(s) before submitting it. <u>lboro.ac.uk/pg-research-proposal</u> add any outstanding ones when they

are available. If you are applying for an

advertised project, you will need to quote

the reference number stated on the

listing. Please be aware that it usually

takes approximately four weeks

to assess your application.

Find out more:

lboro.ac.uk/pg-research-apply

TOP IN EVERY UK UNIVERSITY LEAGUE TABLE

General enquiries

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lboro.ac.uk/doctoral-college

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