FIND AND FUND A PHD

Essentials Program

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What we will cover today

- The nature of a research degree and potential benefits
- Types of research degree
- Who funds research degrees?
- Opportunities for international students
- How do I find a PhD?
- General issues to consider
Research Degrees

- Most well known research qualification = PhD (or DPhil)
- PhD - either after first degree or masters
- Often require 2:1 or equivalent
- In UK, traditionally 3 years, trend to 4 years
- Some PhDs – taught element
- Many institutions, first year as MPhil then transfer to PhD
- Doctorates with substantial taught core available in some vocations e.g. Engineering (EngD) and Business (DBA)
- Part time PhDs possible – 5 or 6 years
What is a PhD?

- A **novel**, in-depth study of specific field
- Results in written report as **Thesis** or Dissertation (length varies; in science average 40,000-50,000 words, in humanities/social science about 80,000 words)
- Oral examination, with 2+ experts (‘Viva’) follows submission
- Ideally, aim to **publish** (journal articles, book chapters, etc.)

- Work closely with one, or more, experienced researchers (PhD supervisors)
- Most in **Universities** and other HEI’s (trend towards doctoral training centres)
- **Non-academic institutions**: e.g. industry, government labs, hospital labs, research institutions, cultural heritage institutions collaborations with academia, e.g. **CASE** Awards
Advice from UCL PhD Graduates

Postdoctoral Researcher
- Find a research area that you really enjoy and to choose wisely when picking a supervisor and PhD program.‘

Postdoctoral Research Fellow
- It requires a lot of work and dedication. It is important to think about whether you really want to pursue it.
- For some careers, a PhD may not be required, but it will always provide you with better ways of thinking and viewing problems.

Associate Editor, a Science News magazine
- Do it because you really love the subject, not because you just want to get ahead.

Senior Scientific Officer, a biotech
- Choose a subject carefully with a job and career path in mind
Possible benefits

- Allows entry to some professions:
  - Academic Career, Research Psychology

- Other research careers - can be an advantage and/or allows entry to senior research positions e.g. Commercial R&D, medical communication, policy or cultural work, curator, advisor roles within think tanks etc.

- Other benefits - Greater credibility, deeper knowledge, developed skills, more experience, wider contacts, international flexibility
The transition points in typical academic scientific careers following a PhD

SLMS: Non-Academic Researcher Destinations

Charities – Research Roles (3)
- Evaluation Researcher – CRUK
- Post doc – Anthony Nolan Research Institute

HE – Non Academic (4)
- Lab Manager
- Clinical Trials Manager
- Medical Student

Charities – General Roles (5)
- Science Content Developer – Science Museum
- Communications Officer – A Cancer Charity
- Operations & Project Support – International NGO
- Editor – A Royal College Publication

Commercial Research & Development (5)
- Senior Scientific Officer – Biotech.
- Research Scientist – GSK
- Clinical Research Associate (CRA) – Chiltern Int.

Journal Editor – Academic Publication
Medical Communications Manager – Pharma. Company

Public Sector & Government (6)
- Statistician (via Fast Stream) – HMRC
- Pharma. Assessor – MHRA
- Senior Research Officer – Welsh Assembly
- Higher Scientific Officer – DEFRA

Management Consultancy & Other Business (6)
- Business Consultant – Deloitte
- Senior Management Consultant – Pharmaceuticals Consultancy
- Research Analyst – Healthcare Consultancy

Research Policy, Strategy & Management (5)
- Programme Manager – MRC
- Science Portfolio Adviser – Wellcome Trust
- Research Support Officer – ICR
- Policy Executive – Renewable Energy
SLASH: Non-Academic Researcher Destinations

- **Government (5)**
  - Speech Writer – European Commission
  - Social Researcher – UK Government
  - Research Assistant – DFID, at the National Audit Office
  - Civil Servant – OfGEM
  - A Private Secretary – Dept. of Transport

- **Media & Marketing (4)**
  - Marketing Manager – Print Magazines
  - Freelance Writer – Book Publishing
  - Freelance Researcher – Media Industry

- **Non-Governmental Organisations (NGOs) (2)**
  - Programme Coordinator – Environmental NGO
  - Freelance Researcher (& part time academic)

- **HE – Non Academic Roles (3)**
  - University Administrator
  - Dept. IT Manager
  - Clinical Trials Coordinator

- **Education (3)**
  - Teacher & Language Coordinator – An Education Authority
  - Secondary School Teacher – A London Academy
  - Teacher (English & Film Studies) – An Independent School

- **Cultural & Built Heritage (3)**
  - Architectural Investigator – English Heritage
  - Curator – British Museum
  - Archaeological Analysis – British Museum

- **Other (2)**
  - Trainee Barrister
  - Freelance Researcher
Industry / Commercial Sector: Key Findings

- Sectors included: IT & Software Development, Engineering & Materials Science Companies, Management Consultancy & Finance
- Around half stated their PhD was essential/desirable for role
- Many said having the PhD added credibility
- Most commonly used skills developed by the PhD were: quantitative research/data analysis skills, problem-solving, project management, collaborative working

Challenges

- Many felt the PhD gave no immediate advantage, with some concerned it may be a disadvantage, making them under- or wrongly qualified
- Adapting to a changed working environment (e.g. faster pace and more team-based) caused problems
- Lack of industry / business experience also stated as an issue – some had to get new qualifications or find short work experience to fill gaps
Types of PhD
ProfessionalDoctorates

- Main areas: **engineering, education, clinical psychology, nursing, business admin, medicine**
- Completion of original piece of research (professional context) - Thesis
- Confers title ‘Dr’
- More appropriate for those pursuing professional rather than academic careers.
- Include a large taught or directed study element - formally assessed
- Taught element – relates to professional practice
- Entry criteria depend on subject;
  - EngD – graduate level + 2:1
  - Others: masters level + substantial professional experience
Collaborative Doctoral Studentships
(from www.rcuk.ac.uk)

- Carried out in collaboration with non-academic organisations
- Contribute resource and intellectual support and mentoring for the project
- **4 years**; at least 9 months ‘on site’
- Commonly ‘CASE’ studentships; in Arts & Humanities CDA (Collaborative Doctoral Awards)
- ‘CASE+’ = year of work post PhD
- Funded by Research Councils UK
- Research topic and supervisor(s) given
- Applications to relevant university departments
Centres for Doctoral Training (CDTs)

- **4 year (1 + 3)** funded PhD programmes offered by most research funding councils
- Located in individual HEIs or consortia of HEIs (Doctoral Training Partnerships / DTP)
- Taught elements, transferable skills, some have placements
London Interdisciplinary Doctoral Programme - LiDO

- Health, animal disease and welfare, plant biology, microbial systems, food security, genes and development, aging, STEM approaches to life sciences, molecular biosciences and industrial technology.
- RVC, QMUL, LSHTM, Birkbeck, King's, UCL

- First or high upper second-class BSc, MSci or Master's in relevant subject
- Includes maths & computational skills
- 4-yr programme
- First Year – teaching & 2 x four-months rotations
- PhD project, yr 2 onwards
- Professional internship for PhD Students (PIPS) – 3 months

- Funded studentships for UK / EU
- If not eligible for funded place – see institutional studentships & scholarships
Postgraduate Research Degrees in the US

**Academic / Research Master’s Degree**
- 2 years
- Complete a thesis
- Can lead to doctoral study

**Doctoral Degree**
- 4 – 6 years (subject & funding dependent)
- 2 years course work – oral & written qualifying exams
- Doctoral Candidacy – 2/3 years dissertation research
- At end, dissertation & oral exam ‘Defense’

Key Difference to UK: all degrees include research & taught components

[www.fulbright.org.uk](http://www.fulbright.org.uk)
PhD funding sources in the UK

- **UK Research funding councils** (umbrella org. = www.rcuk.ac.uk): BBSRC, MRC, NERC, EPSRC, STFC, ESRC, AHRC

- UK-based **research charities**, e.g. medical: www.amrc.org.uk

- **Trans-national agencies & charities**, e.g. EU, WHO, Gates Foundation

- **Overseas funding bodies**

- Universities – **research scholarships & awards**

- Supervisor’s or host department’s **research budget**

- **Self funders** (e.g. part time work / PhD – e.g. some Research Assistant roles)
Research Charities that fund PhDs
Some Examples

- The Wellcome Trust
- Cancer Research UK
- The British Academy
- The British Federation of Women Graduates
- The Institution of Civil Engineers
- Institution of Engineering & Technology
- Institution of Mechanical Engineers
- Royal Geographical Society
- Carnegie Trust for the Universities of Scotland
- Leverhulme Trust
- Action Medical Research

Reference Copy in UCL Careers office
Where to look for funding

HE Institutional & Departmental Research Scholarships
(e.g. www.ucl.ac.uk/prospective-students/scholarships)

www.scholarship-search.org.uk
www.gov.uk/funding-for-postgraduate-study
www.prospects.ac.uk/postgraduate-study/phd-study

Alternative Guide to Postgraduate Funding
www.postgraduate-funding.com/gateway (NB: UCL has a subscription)

Research Professional
www.researchprofessional.com (NB: UCL has a subscription)
International students funding opportunities

KEY ADVICE: Check your home country funding bodies & charities

- British Council Fellowships Programme
- Commonwealth Scholarships Plan
- British Marshall Scholarships – US citizens
- Fulbright Scholarships
- JASON – Australian nationals
- Overseas Research Scholarships
- CORDIS – EU

ERASMUS MUNDUS PROGRAMME
http://eacea.ec.europa.eu/erasmus_mundus/
Example Scholarships Open to Internationals at UCL

www.ucl.ac.uk/prospective-students/scholarships

Total of 74 graduate research scholarships available for 2016/17; 37 for 2017/18

- **UCL Overseas Research Scholarships** (40) – reduce tuition fee level to equivalent of UK/EU student (plus more!)
- **UCL Graduate Research Scholarships** (up to 20 per year) – cover fees and stipend
- **Frederick Bonnart Braunthal Scholarships** (£25,000, per year, for any prospective students)

**NOTE: UCL deadlines usually run Dec-April**

- **Country/region specific** e.g. African Graduate Scholarship
International scholarships and research intensive institutions: some examples

Imperial College PhD Scholarship Scheme
- For 2017/18 ~ 50 places available
- Open to UG’s & Masters
- 3.5 yrs, fees & £20,000 stipend
- No nationality restrictions

Cambridge International Scholarships Scheme
- Total of 250 scholarships (combined with those for UK/EU students)
- Covers fees & maintenance
- For 3 year PhDs
- Must be registered for PhD or ‘probationary’
- December deadline

Funding & Scholarships
- Searchable database – university wide scholarships
- Lists funding by global regions
- College-specific scholarships
Some Non-UK Resources

- **EAS of Fullbright Commission** – [www.fulbright.co.uk](http://www.fulbright.co.uk) - courses, funding, tests, deadlines, applications, rankings etc. Open Days & Careers Service

- [www.gradschools.com](http://www.gradschools.com) – globally advertised opportunities
- [www.studyusa.com](http://www.studyusa.com) – general info on study and life in USA
- [www.prospects.ac.uk](http://www.prospects.ac.uk) – postgraduate study – study abroad
- [www.eurograduate.com](http://www.eurograduate.com) – includes database of courses and research
- Research specific publications *e.g. Science Magazine*
- [www.findaphd.com](http://www.findaphd.com) – International PhD Programs
Advertised Opportunities

Funding Council Opportunities:
http://www.jobs.ac.uk/phd

Collaborative PhDs:
use ‘CASE Studentship’ or ‘Industrial PhD’

- www.findaphd.com/ (includes professional doctorates)
- www.nature.com/naturejobs - international
- www.postgraduatestudentships.co.uk/ - includes funders
- www.prospects.ac.uk (Postgrad. Section - type ‘PhD’ into keyword search)
- Individual University Websites (for full list try UCAS website) - www.ucas.com
- www.ukpass.ac.uk/students/courseresearch
When do I apply?

- Adverts for individual PhD projects can appear at anytime of year – depending on when supervisors are awarded funding

- PhD and funding application deadlines, and PhD start dates can fall throughout the year

- BUT…many PhDs follow the academic calendar, starting in the Autumn

Some key program and funding deadlines fall early in the academic year…..
Some Example Application Deadlines

PhD Programmes

- ICH Child Health PhD Studentships (16th Nov 2016)
- Institut Pasteur International Doctoral prog. (19th Nov)
- Cambridge BBSRC DTP Programme (1st Dec 2016)
- AHRC Northern Bridge DTP (11th Jan 2017)
- LSE PhD Studentships (Jan 2017 for certain funding considerations)
- UCL Public Policy (6th Jan 2017 if applying for funding)
- Oxford Environmental Research DTP (20th Jan)
- Scottish DTC Condensed Matter Physics (29th March 2017)
- Cambs. International Scholarship Scheme. 2nd Dec 2016
- UCL: Graduate Research Scholarships Overseas Research Scholarships Last year 6th Jan 2016
- Imperial College President's PhD Scholarships 11th Nov 2016 24th Jan 2017 28th March 2017

Research studentship funding
Proactive PhD Sourcing
Identifying Relevant Institutions / Research Groups – follow the money!

- Research Councils – databases of current and past funded research
  [http://gtr.rcuk.ac.uk/](http://gtr.rcuk.ac.uk/)
- Published papers in research journals – names of group leaders and contact details ([www.ucl.ac.uk/library](http://www.ucl.ac.uk/library))
- REF Quality Profiles (by subject & by institution) - [www.ref.ac.uk/results](http://www.ref.ac.uk/results)

- Bodies Funding & Coordinating Research, e.g.
  - NIHR: [www.nimr.mrc.ac.uk/research/a-z](http://www.nimr.mrc.ac.uk/research/a-z)
  - AMRC: [www.amrc.org.uk/our-members/member-directory](http://www.amrc.org.uk/our-members/member-directory)
  - Infectious Disease Research network: [www.idrn.org](http://www.idrn.org)
  - The Francis Crick Institute – PhD applications
    [www.crick.ac.uk/about-us/jobs-and-study/phd-students/](http://www.crick.ac.uk/about-us/jobs-and-study/phd-students/)
UCL CAREERS

Contacting potential supervisors

www.ucl.ac.uk/prospective-students/graduate/research/application

Speculative opportunities

Most opportunities, and potential funding, are not packaged as studentships or advertised. Exceptional students, that meet the entrance requirements, are therefore encouraged to be proactive to identify opportunities with UCL academics whose recent research closely matches their interests.

There are three main ways to identify an appropriate supervisor to contact:

1. Browse research programmes to find centres of research in your area of interest. Click through to the department or centre website to find staff profiles.

2. Look on UCL’s Institutional Research Information System (IRIS) where you can search for relevant academic units and potential supervisors by keyword. Not all academics are listed in IRIS but it is a good place to start.

3. Search our online research repository (UCL Discovery) where all UCL's research papers are published, subject to approvals. If you identify a research paper that particularly interests you it is likely that one of the authors would be a suitable research supervisor.

If an academic is very impressed with your research experience and proposal they may be able to help you to identify sources of funding, including from their own, or departmental, research funds. There are also UCL scholarships that they can nominate you for.

3. Making a research enquiry

If you are interested in research degrees in UCL Engineering you should apply using the PRISM application system.

All prospective applicants, except those applying for advertised studentships, are encouraged to send an informal research enquiry. This should either be sent directly to the academic you are interested in working with or the departmental contact.

Making a research enquiry helps define your interests, contributes to making your application successful, and also serves to ensure the identification of the best possible supervisor for your needs.

You can find contact details for academic departments at the bottom of relevant programme pages. Alternatively, you can find Graduate Tutor contact information under “Useful Contact Lists” in the Doctoral School’s Essential Information Page.

For more information on how to contact potential supervisors and write a research proposal please see UCL’s guidance document (PDF, 70KB).

4. Submit a formal application
Finding the right PhD: Questions to ask

- What topic would I like to research?
- What is the research reputation of the group / department (REF - www.ref.ac.uk; research funding)?
- How good are the facilities?
- Will I get formal training? – techniques, seminars
- What useful research skills will I develop?
- Are departmental systems in place if I need help?

Research Manager (Supervisor)
- Approachable?
- Available?
- Amenable?
Useful resources


**UCL Careers online resources (incl. webcasts and videos)**
- [www.ucl.ac.uk/careers/information/study](http://www.ucl.ac.uk/careers/information/study)
Presentation slides available:
http://www.ucl.ac.uk/careers/events/essentials
UCL Careers Graduates
Find out more at [www.ucl.ac.uk/careers/graduates](http://www.ucl.ac.uk/careers/graduates)

- **FREE 2 year specialist careers support for UCL graduates**
  - 1 to 1 coaching with emphasis on accessibility (skype/phone/evenings)
  - UCL job board and TalentBank (in house recruitment agency)
  - continued access to full UCL careers events programme
  - dedicated website/regular bulletins/social media channels
1to1 coaching

Current students:
- CV/ Application coaching - 15 minutes (Mon – Fri) lunch/ early evening
- Short guidance – 20 minutes (Mon – Fri)
- Long guidance – 60 minutes on referral from short guidance
- Interview coaching – 60 minutes (on condition ‘real’ employer interview)

Recent graduates:
- Grad appointments – 30 minutes (Mon – Fri) inc. lunchtime/ early evening/ phone/ skype
- Short guidance – 20 minutes (Mon – Fri)
- CV/ Application coaching – 15 minutes – same service as for current students
- Interview coaching – 60 minutes (on condition of ‘real’ employer interview)

Booking
- Online: up to 7 days in advance: My Careers Service
  - [http://www.ucl.ac.uk/careers/students/mycareersservice](http://www.ucl.ac.uk/careers/students/mycareersservice)
- By phone: (call 020 3549 5900 after 9.30am)/ in person
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UCL.AC.UK/CAREERS/NEWS

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