SLMS

POSTGRADUATE RESEARCH DEGREES

WHAT THEY ARE

HOW TO GET ONE

DR CALUM LECKIE

UCL CAREERS

www.ucl.ac.uk/careers/events/getinto >

Careers in Academic Research
What we will cover

- The academic career path & issues to consider
- Various types of PhD on offer
- Who funds PhDs
- Where to find PhDs: reactive and proactive methods
PhD’s, what and where?

- A novel, In-depth study of specific field
- Results in written report as Thesis or Dissertation
- Oral examination, with 2+ experts (‘Viva’) follows submission. Publication(s) preferable
- Often initially registered as *MPhil* before upgrade
- Work closely with 1, or more, experienced researchers
- Most in *Universities* and other HEI’s
- UK: Traditionally, **3 yrs**. Increasingly **4 yr** programmes
- Other places: Government Labs, Hospital labs, Research Institutions, Commercial labs.
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, e.g. medical communication

- Other benefits - Greater credibility, deeper knowledge, developed skills, more experience, wider contacts, international flexibility
## Destinations of 2012/13 UCL Doctoral Graduates

### TOP 5 OCCUPATIONS (57%)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>University researchers, unspecified discipline</td>
<td>123</td>
</tr>
<tr>
<td>Higher education teaching professionals</td>
<td>55</td>
</tr>
<tr>
<td>Researchers n.e.c.</td>
<td>53</td>
</tr>
<tr>
<td>Medical practitioners</td>
<td>38</td>
</tr>
<tr>
<td>Clinical psychologists</td>
<td>26</td>
</tr>
</tbody>
</table>

### OTHER OCCUPATIONS (38%)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemists, medical scientists</td>
<td>11</td>
</tr>
<tr>
<td>Psychologists</td>
<td>11</td>
</tr>
<tr>
<td>Health professionals n.e.c.</td>
<td>9</td>
</tr>
<tr>
<td>Finance and investment analysts and advisers</td>
<td>8</td>
</tr>
<tr>
<td>Laboratory technicians</td>
<td>8</td>
</tr>
<tr>
<td>Authors, writers and translators</td>
<td>7</td>
</tr>
<tr>
<td>Quality assurance and regulatory professionals</td>
<td>6</td>
</tr>
<tr>
<td>Journalists, newspaper and periodical editors</td>
<td>5</td>
</tr>
<tr>
<td>Programmers and software development professionals</td>
<td>5</td>
</tr>
<tr>
<td>Chief executives and senior officials</td>
<td>5</td>
</tr>
</tbody>
</table>

5% FURTHER STUDY! 39% stated their occupation as ‘Researcher’
After a PhD – the Academic Career Path (UK)

- Postdoctoral Researcher (Associate)
- Postdoctoral Researcher (Fellowships)
- Lecturer (e.g. Grade A, B etc.)
- Senior Lecturer/Reader
- Probationary Lectureship
- Professorial Chair

‘Tenured’ Positions

Temporary Positions

PhD
Finding the right PhD: Questions to ask

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

**Research Manager**

- Approachable?
- Available?
- Amenable?
Doctoral Studentships: Varieties on offer
Collaborative Doctoral Studentships
www.bbsrc.ac.uk/business/training/industrial-case.aspx

- 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
- ‘CASE+’ = year of work post PhD
New Route PhD
www.newroutePhD.ac.uk

- Integrates in-depth research with research training & high level professional skills (e.g. management)
- 4 years duration (some variation)
- For both academic & non-academic careers
- Open to UK and non-UK students
- Apply via each University (individual criteria)

- Research areas covered include: Anthropology, Social Sciences, Maths, Physical Sciences, Business, Computer Science, Engineering, Biosciences, Human Sciences
- Offered by a consortium; Birkbeck, Brunel, Herriot Watt, Kent, Newcastle, Portsmouth
4 Year UK Programmes

Example: BBSRC Doctoral Training Partnerships – In prev. years app deadline early Jan

- **1st year.** - Formal teaching & lab rotations

- **3 month work placement** in external organisation
  - Not related to PhD project
  - Focus on transferable skills & experience of new job sector
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)

- Online resources e.g. webinar
- Scholarships – Deadline 31st Oct!
- **US Grad School Day – March 2015**
  - Choosing Degree
  - Making applications
  - Admissions exams
  - Funding
Overseas Study

Germany
www.research-in-germany.de
• 2 routes: Traditional (3 – 5 yrs), Structured Programme (3 yrs)

General
www.prospects.ac.uk/studying_abroad.htm
www.findaphd.com/study-abroad
www.studiesinaustralia.com

Databases
www.hotcoursesabroad.com
Covers: US, Australia, Malaysia, Singapore, NZ, Ireland, Netherlands, Sweden, HK

www.petersons.com/
‘Grad School Bound’ US - Specific
Doctoral Studentships: How they are funded
UK Funding Councils (Umbrella org. = [www.rcuk.ac.uk](http://www.rcuk.ac.uk)), e.g. BBSRC, MRC, ESRC, NERC

UK-based Research Charities, e.g. Medical: [www.amrc.org.uk](http://www.amrc.org.uk)

Trans-national agencies & charities e.g. EU, WHO, Gates Foundation – ‘The Grants Register’

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)
UK Research Councils – Key Issues

- **Don’t apply to councils** – enquiries direct to department, institute or company

**RCUK ‘Terms & Conditions for Training Grants’**
- Fees & stipend for UK Citizens or resident 3 years
- EU resident - fees only
- Internationals didn’t usually qualify for either

- **MRC exceptions** – ‘scarce strategic skills’ including: advanced mathematics, statistics and computational skills, physical and engineering sciences.

- Key portal Research Councils UK website [www.rcuk.ac.uk](http://www.rcuk.ac.uk)
HE Institutional & Departmental Research Scholarships
www.scholarship-search.org.uk

www.gov.uk/funding-for-postgraduate-study

E.g. Research Assistant
E.g. Research Technician

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

- JASON – Australian nationals
- Commonwealth Scholarships Plan
- CORDIS – EU
- European Science Foundation
- British Marshall Scholarships
- British Counsel Fellowships Programme
- Fulbright Scholarships
- Overseas Research Scholarships

FindAPhD

www.findaphd.com

‘Funding’ page

ERASMUS MUNDUS PROGRAMME
http://eacea.ec.europa.eu/erasmus_mundus/

KEY ADVICE: Check your home country funding bodies & charities
Example Scholarships Open to internationals at UCL

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

Currently 67 Graduate research scholarships available

- UCL Overseas Research Scholarships – 40, cover fees
- UCL Graduate Research Scholarships – 17, fees & stipend
- Frederick Bonnart Braunthal Scholarships (£15,000, 1 year) – prospective students

NOTE: UCL Funding deadlines run from Jan to April

Country / region Specific

- E.g. African Graduate Scholarship
International Scholarships @ Research Intensive Institutions: some examples

Imperial College PhD Scholarship Scheme
• In 2013 were 50 places
• Open to UG’s & Masters
• 3.5 yrs, fees & £20k Stipend
• No Nationality Restrictions

Cambridge International Scholarships Scheme
• Approx. 80 places avail,
• Covers fees & maint. For 3 yrs PhDs
• Must be registered for PhD or ‘probationary’
• Deadline Dec 3rd.
• £50 app. fee

Funding & Scholarships Page
• Searchable database – university wide scholarships
• Lists funding by global Regions
• College – specific scholarships
Doctoral Studentships

How to find them
Advertised Opportunities

- **www.findaphd.com/** (includes professional doctorates)
- **www.nature.com/naturejobs** – search ‘studentships’ – UK & International
- **www.postgraduatestudentships.co.uk/** - includes funders
- **www.prospects.ac.uk** (Postgrad. Section - type ‘PhD’ into keyword search)
- **www.ukpass.ac.uk/students/coursesearch**
  Select ‘Research’ for study type. Search by institution

- Funding Council Opps: jobs.ac.uk/employers/research-councils
- Collaborative PhDs: use ‘CASE Studentship’ or ‘Industrial PhD’
UCL Research Degree Opportunities

UCL Database of Research Opps:  
www.ucl.ac.uk/prospective-students/graduate/research/subject-areas

Degrees that have been offered include:
- Child Health PhD Studentships
- MRC PhD studentship - Computational Biology of Neurodegenerative Diseases
- Grand Challenge Studentships
- BHF 4 Year PhD Studentships in Cardiovascular Biomedicine
- UCL-NIH Neuroscience Scholar's Program (international programme)
- Four year PhD programmes e.g. BBSRC DTP
• **MRC Clinical Sciences Centre** – [http://csc.mrc.ac.uk/phd-student-recruitment-apply/](http://csc.mrc.ac.uk/phd-student-recruitment-apply/) (open now)

• **European Molecular Biology Laboratories International PhD Programme** - [www.embl.de/training/eipp/index.html](http://www.embl.de/training/eipp/index.html)

• **BBSRC Research Studentship Opportunities** - Include 4 year DTP’s & CASE Studentships
  • [http://bbsrcdtp.lifesci.cam.ac.uk/](http://bbsrcdtp.lifesci.cam.ac.uk/)
  • [www.dtpstudentships.manchester.ac.uk/](http://www.dtpstudentships.manchester.ac.uk/)
  • [www3.imperial.ac.uk/bbsrcdoctoraltrainingpartnership](http://www3.imperial.ac.uk/bbsrcdoctoraltrainingpartnership)
  • [www.ucl.ac.uk/libphd](http://www.ucl.ac.uk/libphd)
  • [www.biodtp.norwichresearchpark.ac.uk/](http://www.biodtp.norwichresearchpark.ac.uk/)

• **Cancer Research UK CI PhD Studentships**

• **Wellcome PhD programmes** - [www.wellcome.ac.uk/Funding/](http://www.wellcome.ac.uk/Funding/) > Biomedical Science > PhD Funding & Undergraduate Opportunities
  • E.g. Sanger Institute PhD Programme
  • E.g. NIH Collaborate PhD Prorgamme
Proactive Applications for Research Studentships e.g. UCL

1. Check Entry Requirements
2. Do your Homework
   Subject index, research groups, departments
3. Enquire before you Apply
   • Specific academic or graduate tutor
   • Self funded or need funding
   • Download guidance document – how to write proposal & contact academics
4. Submit formal Application
How to Identify Relevant Institutions / Research Groups

- **Research Councils** – *databases of current and past funded research* (portal = [www.rcuk.ac.uk](http://www.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** – [http://www.ref.ac.uk/](http://www.ref.ac.uk/) - avail. 18th Dec.

- **Bodies Funding & Coordinating Research**
  - E.g. NIHR: [www.nimr.mrc.ac.uk/research/a-z](http://www.nimr.mrc.ac.uk/research/a-z)
  - E.g. AMRC: [www.amrc.org.uk/our-members/member-directory](http://www.amrc.org.uk/our-members/member-directory)
  - E.g. Infectious Disease Research network: [www.idrn.org](http://www.idrn.org)
Follow the money!

Cogent SSC Report 2010

‘R&D investment by pharma industry is increasingly in medical biotech.’ – sees increasing collab. with NHS & HE

Public – Private Research Partnerships, examples

• ‘NOCRI Translational Research Partnerships’ – NHS / Ind. Collab with centres of excellence [www.nocri.nihr.ac.uk](http://www.nocri.nihr.ac.uk)


• UK’s Technology Strategy Board. – Priority areas for research investment include Bioscience, Healthcare, Food. [www.innovateuk.org/our-priorities](http://www.innovateuk.org/our-priorities)
How HEI’s are Recruiting PhDs

2014 Survey by HECFE
surveyed senior academics across disciplines, 60 institutions
- Applicant success rate: 10 – 20%
- Around 50% recruited are UK resident
- Approx. 1/3 of applicants in Biological Sciences had a PG qual
- Between 10 – 20% of PhDs on research council funded schemes (e.g. BBSRC) had a PG qual.

Top qualities looked for in applicants (in order):
1. Have ideas for research proposal or design (stated by nearly 80%)
2. Prior first degree grade attainment
3. Prior masters attainment
4. Evidence of research skills
5. Other research experience

KEY FINDINGS:
- A lot of emphasis is placed in evidence of experience of research rather than potential aptitude
- Excellent academic performance at masters level (esp. dissertation) may be used as key differentiator
Getting Research Experience

Short Term Research Opportunities in UCL Division of Biosciences:

- ‘All Bioscience students are actively encouraged to approach labs. Many of the labs have one or two students for the summer’.

  Institutional Research Information System (IRIS): http://iris.ucl.ac.uk/iris/

- Several schemes running in the teaching hubs.
- Also, is a FLS Dean's summer studentship scheme (running for the second year) to help additional students gain positions.

Undergraduate Research Opportunities Programme at Imperial:

www3.imperial.ac.uk/urop Eligibility includes ‘Any registered undergraduate student of another UK institution of higher education’
Academic Careers Page:

For prospective research students

Considering a research masters (MRes) or Doctoral Studentship (PhD)? Here you will find resources to help you with your decision and for making applications.

Key Resources

- **SEMINAR SLIDES (PDF)**: Postgraduate Research Degrees, what they are, how to get them. For Life & Health Sciences students (delivered 10/10/2014)
- **LAB - BASED INTERSHIPS (PDF)**: For Life & Health Sciences
What’s coming up

- **LIFE & HEALTH SCIENCES CAREERS WEEK** (Open to all UCL Students) w/c 24th November
  - A Career in Medicine, 24th
  - Careers in Public Health, 25th
  - Careers in Bio. Pharma, 26th
  - Seminar: Science comms, TBC
  - Seminar: CVs & Applications, TBC

- Government & Policy  w/c 10th Nov 2014
- Charities & NGO’s w/c 2nd Feb 2015
- Environment w/c 9th Feb

FOR GENERAL APPOINTMENTS, EVENTS – BOOK ONLINE THROUGH

[www.ucl.ac.uk/careers/myuclcareers](http://www.ucl.ac.uk/careers/myuclcareers)
UCL Careers: Location, Contacts

- 4th Floor, Student Central, Malet Street, WC1E 7HY
- 020 7866 3600
- careers@ucl.ac.uk
- www.ucl.ac.uk/careers
- https://twitter.com/uclcareers