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Great jobs for bright people

A Practical Guide to Planning an Academic or Research Career

An ebook explaining typical routes, funding sources and
how to gain experience

Introduction

If you are enjoying doing independent research during your undergraduate career, you might be considering staying on at university to do a master's and then a PhD. But there are lots of decisions to make. For example, are you personally and financially prepared to commit to postgraduate study? This ebook will help you to decide whether doing a master's and then a PhD followed by an academic career is for you. It is an incredibly fulfilling career path, but also a highly competitive one that requires years of dedication. In this ebook you will learn about the routes you must take to become a lecturer or a researcher, as well as alternative career opportunities outside academia for those trained to postgraduate level.

THIS EBOOK WILL COVER:

- Postgraduate study: how is it different from your degree?
- 5 steps to an academic career
- Funding a PhD
- How to gain industry experience while studying for a higher degree
- What you need to know about your PhD before you start
- What jobs.ac.uk can do for you

Also included are a couple of simple 5-minute activities to help you consider your options and an action plan template to help you plan your academic career.

Postgraduate study: how is it different from your degree?

TIME TAKEN

Undergraduate: usually three years.

Postgraduate: usually one year full time or two years part time at master's level.

What does this difference mean for the potential student?

Obviously you don't have to commit as much time to a postgraduate course. If doing the course means you have to take time off work, or study alongside working, then you only lose a few months rather than a few years. However, there are some other timing factors to be considered.

Because a postgraduate course is much shorter, you do not have the same luxury of time to settle in that you do in undergraduate degrees. A postgraduate course demands that you immediately focus on your work, and start working at an intense level straightaway, whereas in a degree that lasts three years, there is some leeway for lecturers to offer introductory sessions at the start of the year or term.

TEACHER SUPERVISION

Undergraduate: close guidance.

Postgraduate: independent study.

Although not all postgraduate degrees leave you completely alone without classroom time, the ethos of teaching is different at postgraduate level. As the student you are supposed to drive your own learning, which means being more self-motivated and independent of your teacher.

Of course if you need guidance you will have lecturers and supervisors who are more than happy to help, but the intended learning experience is very different at postgraduate level. You are supposed to come up with your own ideas and theories rather than just learning about other people's findings. You will be encouraged to do research around the topic you are interested in, but will not always be given set tasks to complete within a time frame.



PERSONAL EXPERIENCE

Undergraduate: for many, it's party time!

Postgraduate: dedicated work, perhaps some feelings of isolation.

It is easy to fall into the trap of thinking that undergraduates do no work and come to university to have three years' worth of socialising! Of course this is definitely not true and most undergraduates do work really hard. But it would be fair to say that social activities and hobbies are a big focus in an undergraduate's life. This is not so true for postgraduates. They are less likely to live in university accommodation and more likely to live at home with families or pre-existing groups of friends. The fact that their degree is shorter and the work is more challenging (not to mention postgraduates being a few years older) means that their minds are generally more focussed on work. In fact, sometimes postgraduates can become a little isolated. Universities and students' unions provide fewer facilities for postgraduates to meet each other. And the very nature of the study means that students are often working alone. So, the risk of loneliness is high if you are living outside the university, especially so if you are doing a distance-learning course of the type discussed in this e-learning article. However, if you are dedicated to your course and take every opportunity that your university offers to engage with other students in the postgraduate community, you should be able to combat these feelings of isolation.

FEES

Undergraduate: c.£9,000 per annum for a UK student.

Postgraduate: Depends on the course and the university, averaging at approximately £8,000-£9,000 per year for a full time taught course. Fees for overseas students are often significantly higher. Each UK university has their own fees structure, so it is always best to check with individual institutions.

The funding situation for postgraduate courses is different too. Many postgraduates get outside funding to cover fees and possibly expenses, either from an employer or from a public funding body or charity relevant to their field or from their university itself. Others choose to fund themselves and perhaps study part time in order to hold down a job to pay those fees.

This is something to consider when thinking about postgraduate work, especially if you have recently finished your undergraduate study and have debts already. However, in today's working climate, many people are deciding that the financial cost of another year's study is worth the pay-off you will get in enhanced employability.

ACTIVITY 1: ARE YOU READY FOR POSTGRADUATE STUDY?

Answer the four questions below to test your readiness.

1. Are you on track for at least a 2:1?
2. Do you enjoy independent study away from the classroom?
3. Do you prefer to work alone on a project (or with a very small team)?
4. Are you happy to stay at university while your friends leave and acquire graduate jobs?

If you answered 'yes' to all or most of the questions above then you are ready to think about postgraduate study.

5 steps to an academic career

After completing a master's, in order to go on to an academic career, most people will undertake a PhD, also known as a doctorate. A PhD takes three years full time or five to seven years part time. It is a piece of independent research undertaken alone with close supervision by an established academic in the field. You will not attend formal classes while doing a PhD, but instead will have one to one meetings with your supervisor. Some PhD students also undertake paid teaching within their department, leading seminars, marking essays and occasionally giving lectures. If you would like to pursue an academic career, this teaching experience is as important as completing your PhD qualification.

Follow our five easy steps and you should be well on the way to finding yourself on the right course in the right university.



1. CHOOSE THE RIGHT MASTER'S

If you're not already on a master's course, it's worth looking around and choosing a master's which is most likely to lead you onto a PhD in the subject area you are most interested in. When researching master's courses, have a look at the areas of specialism offered by the department – are there academics there working on projects in areas of interest to you? What are the current PhD students researching? Does the university offer many studentships annually? How highly is the quality of the research at the university in your subject area rated by the latest Research Excellence Framework (REF)? All of these factors will determine the suitability and quality of courses on offer.

2. CHOOSE THE RIGHT DEPARTMENT/ACADEMIC

Once you are on your master's course, you may then begin to get an idea of the area you would like to pursue further research in. Once this is established you can then start to look for suitable departments to apply to. If you have chosen your master's degree with a view to moving on to PhD study at the same university, this step will be easy. However, if you decide to look elsewhere, you will need to make sure that your subject area of interest is covered by someone in that particular department. University department websites normally have information on staff, their research interests and published work.

3. RESEARCH ANY AVAILABLE STUDENTSHIPS

Studentships are funded so it's worth looking to see if there are any that are suited to your line of study. Studentships are normally advertised as and when they come up, so it's important to keep a constant eye out for them on the jobs.ac.uk website

4. GET YOUR APPLICATION RIGHT

Once you have a clear idea of what you want to research you will either need to put together a research proposal or, in the case of applying for an advertised studentship, you will need to show in your application a clear understanding of the research to be undertaken and your suitability to undertake it. Applicants usually contact the department and/or academic as a first port of call to discuss this before taking their application further. Certain qualifications, such as an upper second class degree and IELTS score of 6.5 or more for speakers of English as a second language, may be a minimum requirement.

5. LOOK FOR FUNDING

If you have applied for a studentship you will probably already have funding in place; however, if your course is only part funded or not funded at all, you will either have to be self-funding or apply to a sponsor or charitable organisation. If you want to do a PhD then it really is worth making sure you have investigated all of the possible funding sources – there are probably more than you think.

ACTIVITY 2: MAPPING YOUR LONG TERM GOALS

You are currently an undergraduate. Fill in the questionnaire below to map your academic future.

A. In one year's time I will be: (E.g. completing a master's)

B. In four years' time I will be: (E.g. completing a PhD or having gained some teaching or workplace experience)

C. In ten years' time I will be: (E.g. working in academia as a lecturer or researcher)

Funding a PhD

Funding bodies support PhD students in different ways; some will pay course fees only; some will include a stipend (maintenance costs) or travel expenses while others will simply be a one-off award to ease the financial burden of further study. Similarly, each funding body will have its own criteria for eligibility. At PhD level, full funding will tend to be awarded on academic merit but there are also some that take into account financial background and other criteria such as gender (in the case of the British Federation of Women Graduates). Here is a list of all of the main sources of funding for UK based PhD students.



RESEARCH COUNCILS

Research councils currently fund thousands of doctoral students in the UK. However, funding is made available through the participating universities rather than the research councils themselves. Eligibility criteria and award amounts are standardised, and you will find many other funded PhDs referring to research council rates when defining their own.

Research council studentships include fees and a stipend (you can check current [Research Council award levels here](#)) which is paid tax-free.

UKRI

[Arts and Humanities Research Council](#)

[Economic and Social Research Council](#)

[Engineering and Physical Sciences Research Council](#)

[Biotechnology and Biological Sciences Research Council](#)

[Science and Technology Facilities Council](#)

[Medical Research Council](#)

[Natural Environment Research Council](#)

See jobs and PhD opportunities funded by the Research Councils on [jobs.ac.uk](https://www.jobs.ac.uk).

ACADEMIC INSTITUTIONS

Universities, colleges and research institutes also fund their own studentships, and these will often be listed on the institution's own website alongside its research council-funded studentships. Some will offer fees only, while others may offer a stipend as well. Amounts vary, although many use the Research Council rates as a benchmark.

COMMERCIAL AND CHARITABLE ORGANISATIONS

A number of non-academic organisations help fund research at PhD level in collaboration with the university hosting the study. A number of charitable organisations, foundations and trusts can help fund PhDs.

THESE INCLUDE:

[The Wellcome Trust](#)

[Institution of Engineering & Technology](#)

[Cancer Research UK](#)

[Institution of Mechanical Engineers](#)

[The British Academy](#)

[Royal Geographical Society](#)

[The British Federation of Women Graduates](#)

[Carnegie Trust for the Universities of Scotland](#)

[The Institution of Civil Engineers](#)

[Leverhulme Trust](#)

[Action Medical Research](#)

However, there may be smaller charities relevant to your area of study that offers funding, such as The Grundy Educational Trust, which supports science students under 30 years of age.

SELF FUNDING

Lastly, if you really can't get funding from the above sources, you may be able to fund your own way through a PhD. Professional and Career Development loans are available or another option is to study part time whilst working.

Author: Sara McDonnell

How to gain industry experience while studying for a higher degree

Immersing yourself in academic life during your postgraduate career is important, but it is also vital to consider your employability in a wider sense.



STUDENTSHIP INTERNSHIPS

Postgraduates have a number of pathways available to them when it comes to continuing their study, but a key consideration is often: Should I stay in academia, or start using my expertise in industry, commerce or in a not-for-profit organisation.

While academia is still a popular option, there are a number of initiatives that now make the choice between academia and industry much less stark, and provide valuable opportunities for students to bridge that gap.

CASE studentships (formerly known as 'Collaborative Awards in Science and Engineering') are collaborative training grants that provide students with a first-rate challenging research training experience, allowing top quality bioscience graduates to undertake research, leading to a PhD, within the context of a mutually beneficial research collaboration between academic and partner organisations. In addition to experience of an industrial research environment, the student should receive business-related training,

for example, in project-management, business strategy, and/or finance.

CASE STUDENTSHIPS ARE AWARDED IN THREE WAYS:

- Block allocations to Industrial CASE Partnerships (ICP) / Collaborative Training Partnerships (CTP) for collaborations between these strategic industrial partners and academic institutions of their choice
- Annual allocations to Doctoral Training Partnerships (DTP) for collaborations with non-academic institutions of their choice
- Conversion of DTP Training Grants to CASE studentships

Further information can be [found here](#).

DOCTORAL TRAINING PARTNERSHIPS (DTPS)

DTPs normally leading to the award of a PhD are for a minimum of three years and enable postgraduate students to undertake training in research, research techniques and employment related skills.

DTPs may be held on a full or part time basis for those students wishing to combine their research training with work or domestic responsibilities. Part-time DTPs should be awarded for no less than 50% of full-time, and on the understanding that the approved programme of research training can be carried out effectively.

INDUSTRIAL CASE STUDENTSHIPS

Industrial CASE gives students experience outside a purely academic environment. Industrial CASE awards are for a minimum of 3.5 years and provide for training of a research student on a project which involves the joint supervision of the student by a member of staff at an academic Research Organisation and an employee of a UK industrial firm or an organisation in the public service (the non-academic partner).

INDUSTRIAL CASE-PLUS STUDENTSHIPS

Industrial CASE-Plus extends the Industrial CASE competition to help students become more effective in promoting technology transfer, should their chosen career path take them into either academic research or industry. For the first 3.5 years of the award, Industrial CASE-Plus operates in the same way as the Industrial CASE competition (see above).

The main difference is that the student spends a final year working full-time on the premises of a non-academic partner as an employee. This is seen

as continued “hands-on” technological training for the student. During this additional year, the student is employed by the sponsor company, at a salary equivalent to that of a new STFC postdoctoral fellow.

KNOWLEDGE TRANSFER PARTNERSHIP

The Knowledge Transfer Partnership (KTP) scheme helps businesses in the UK to innovate and grow. It does this by linking them with an academic or research organisation and a graduate.

A KTP enables a business to bring in new skills and the latest academic thinking to deliver a specific, strategic innovation project through a knowledge-based partnership.

The academic or research organisation partner will help to recruit a suitable graduate, known as an Associate. They will act as the employer of the graduate, who then works at the company for the duration.

More information [here](#)

What you need to know about your PhD before you start

We asked two academics to give their advice for anyone who is considering embarking upon a doctorate.

1. DR PETRA CAMERON IS A LECTURER IN PHYSICAL CHEMISTRY AT THE UNIVERSITY OF BATH.

“After graduating I didn’t really know what I wanted to do, but I could see that all of the jobs I was most interested in required a PhD. Once I got started I really loved the work but doing a PhD is not the easy option.

“PhD students need to be resilient as you have to work on a completely original research project that no-one has done before. During the course of your PhD the research outcome is open-ended. Ultimately, in the worst-case scenario your work could be a failure. It is the supervisor’s job to ensure that the project doesn’t fail by checking progress and suggesting new experiments. You also have to be flexible and willing to take risks. It may be that the research won’t fail, but in fact it could have very interesting outcomes.

“Finding a good supervisor is vital, someone who will help steer you towards your own research ideas and goals. Within areas that include laboratory work it is important to find a supervisor with good skills and techniques in this area, and a good track record of research, who encourages you to develop these skills for yourself.”

2. PROFESSOR MARTIN SHEPPERD IS A PROFESSOR IN SOFTWARE TECHNOLOGIES AND MODELLING AT BRUNEL UNIVERSITY

“I agree that finding a good supervisor is crucial. Ideally you need someone with a good track-record of completions; someone who is experienced as a supervisor. Students need the supervisor’s help when knowing whether they’ve done enough work towards their doctorate. As a student it’s easy to become too immersed in your work and lose perspective. You need a supervisor to tell you “It’s good enough”. Most students are driven and want to give their best, but spending too long on the work can be counter-productive. Perfectionism can be an asset at times, but it can also be debilitating.

“It can also be a good idea to do something other than academic study before you start your doctorate. Working for a while is very beneficial, and it gets you off the academic treadmill. You’ll also find out whether or not you really do want to do your doctorate after all. The decision to return to study will then be a conscious choice rather than a default option, and all this will help to sustain you in the darker phases of your doctorate, of which there will be some.

“Working towards a doctorate is a solitary process – you may feel tempted at times towards self-doubt. At times like this a sense of detachment is important, along with the ability to maintain alternative perspectives.

“It is also really important to be open-minded from the beginning and read as widely as you can. You will become more focussed as your doctorate progresses. Whatever your area of research, the problem and questions you are asking are almost certainly much bigger than you originally thought. You don’t really need to have defined this problem before you start – this can be addressed as you progress in your doctorate. What’s really important is that you are asking the right questions. Doing a doctorate is really like an

apprenticeship in research. Your doctorate may be a replication of something someone else has done before, or may indeed confirm what others have discovered.

“You may hope to uncover something totally new and amazing. Unfortunately this is highly unlikely and winning a Nobel Prize is more the stuff of movies than real life. But even so you can have the time of your life doing something challenging, stimulating and creative.”

Author: Sarah Marten

SUMMARY

So, what are the key pieces of advice to take away from this ebook?

1. Postgraduate life is very different to that at undergraduate level
2. Starting a master's or a Doctorate is a big decision. Consider it carefully
3. Postgraduate degrees are funded in a different way and funding awards are very competitive
4. Work placements are available



What jobs.ac.uk can do for you

There are two aspects of the process of beginning postgraduate study that jobs.ac.uk can assist with.

First, universities worldwide advertise their studentship positions on jobs.ac.uk. This makes it a one-stop shop for anyone looking to begin postgrad study. If you would like to search for studentships in your field, please follow these links:

Master's -

<https://www.jobs.ac.uk/search/masters>

PhD studentships -

<https://www.jobs.ac.uk/phd>

You can narrow your search by discipline, location and employer type. Finding your dream degree could not be easier!

Second, jobs.ac.uk offers a wealth of Careers Advice about the process of undertaking postgraduate study. Later on, if you decide to develop an academic career, our articles and blogs written by experienced academics and careers advisors will guide you through the process. We also include job profiles describing what life working in these positions is like, and

country profiles that will help you decide whether you'd like to look for work overseas.

[Careers advice](#)

[Which master's Degree - MRes or MA/MSc?](#)

[Managing your upgrade interview](#)

[Your PhD - Before You Begin](#)

[Top Ten Tips for doing your PhD](#)

[I have got my PhD, where do I go from here?](#)

[New PhDs: Going Overseas in Search of an Academic Career](#)

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Academic/Research Career Development Action Plan

MY TARGET CAREER IS....

HOW WILL I ACHIEVE THIS?

THE UNIVERSITIES/ORGANISATIONS I'M INTERESTED IN WORKING IN ARE...

WHAT ACTION CAN I COMPLETE TODAY?

(e.g. research organisations, speak to my department, speak to my Careers Advisor)



WHAT AM I LOOKING FOR IN A POSTGRADUATE COURSE?

(e.g. location, connections, department reputation/ranking, with a leading academic, my current university)

WHAT ACTION CAN I COMPLETE TODAY?

(e.g. research departments, look at courses on jobs.ac.uk)

WHAT FUNDING SOURCES ARE OPEN TO ME?

(e.g. if you don't know – find out! Look at the links to the Research Councils in this ebook as a starting place)

HOW WILL I GAIN WORK EXPERIENCE WHILE STUDYING?

WHAT NETWORKS CAN I JOIN?

WHAT PROFESSIONAL ORGANISATIONS CAN I JOIN?

WHO COULD SUPERVISE MY POSTGRADUATE DISSERTATION?



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