Postgraduate study in Life Sciences

Introduction
This document is aimed at students who are considering applying for postgraduate courses, either taught (Masters programmes) or research (PhD). So as not to duplicate advice and information given elsewhere, it mainly points you to existing resources, and also gives you some rather personal views on choosing and applying for a postgraduate course.

Why do I want to do a Masters or PhD?
It is worth considering your motivation carefully. The Prospects Graduate Careers Website (http://www.prospects.ac.uk/postgraduate_study.htm) has a useful section on Reasons for considering postgraduate study.

How does a Masters or PhD work?
Science Masters programmes are generally an extension of what you are doing already: a combination of taught modules and some research, usually with an extended lab project. An MRes tends to have a greater practical component than an MSc and/or more emphasis on independent study. An MPhil is rarely offered as a standalone qualification: it is an intermediate research award that you may get on the way to a PhD.

An MSc or MRes programme generally lasts one year (full time). Masters programmes are useful for students who want to become more specialised or change the focus of their studies, or gain more lab experience (if you haven’t done a lab project or want time to decide whether the commitment of doing a PhD is really for you.) Some Masters will train you for a particular career or job, but many will not, so do think carefully about what you want to do and why. Trying to improve on a 2.1 so you may be able to get into Medicine or Dentistry isn’t a great reason for doing a Masters, unless you also consider what use the extra qualification will be if you should change your mind or not get a place.

A PhD should only be considered by those with a serious commitment to research. This does not mean that you can only become a researcher afterwards, but you will be spending at least 3 years of your life focussing on a very specific scientific question. By doing so, you gain a training in the process of research, as well as other transferable skills.

If you are expecting a 2:1 or first, and are doing an extramural year or lab project, there is no need to do a Masters before you do a UK PhD. However, it is becoming more common to do so. Some 4-year PhD places include an equivalent of a Masters year, with taught components and rotation through a range of short lab projects before you commit to a particular 3 year research project.

When applying for PhD places, you obviously need to have some idea of the area you want to research, but you do not have to develop your own detailed research proposal. You will be recruited to a lab to carry out a specific project. You do not have to be an expert in the topic of the PhD to apply for the place, although you should obviously do a bit of background reading to support your application. You should not feel restricted by your degree title: e.g. you do not have to be doing a BSc in Neuroscience to apply for a PhD at the Institute of Psychiatry. Look at the details of the project, what kinds of techniques it will use, and what they want in an applicant.

Finance
There is no postgraduate equivalent to the system of undergraduate student loans and grants.

Most Masters expect you to finance yourself (fees and living expenses), though some (the most competitive, for obvious reasons) may have bursaries for all or some students. Remember that a full-time Masters lasts a full calendar year, and is likely to be more intensive than your BSc, so you cannot rely on part-time work to get you through. Some part-time Masters programmes are available, but this arrangement is commonly aimed at students who are being sponsored by their employer (i.e. where the Masters is considered part of the job training), so you get onto one of these by getting the job first.

In contrast, most PhD places are funded (a good thing, as they last 3 or 4 years), by a research council, charity or similar. Your fees will be paid and you will receive a tax-free stipend for your living expenses if you are a home student. Unfortunately, many sources of PhD funding exclude international students, and sometimes EU nationals as well. For instance, non-UK EU nationals usually qualify only for a ‘fees only’ (no stipend) award from UK Research Councils. For this reason, you should always include information on your nationality in your applications. If a potential supervisor likes you they may be able to apply for “top up” funding to make up the difference between home and overseas fees. However, the funding issues mean that it can be harder for
international students to find PhD places in the UK, unless they can arrange their own funding, perhaps from their home country.

**Qualifications**

When you apply successfully for a Masters or PhD place, you will usually be given a conditional offer.

A 2:1 is considered the minimum qualification for a PhD place (stipulated by the funding body and therefore not flexible). Very competitive PhD programmes such as those at Cancer Research UK mainly select applicants who are expected to get a first, but it would be unusual to be offered a place conditional on getting a first.

Some Masters programmes also stipulate a 2:1 (usually a sign of popularity), while others simply specify a "second class degree". It is becoming rarer to find Masters programmes that will take a student with a third, although some may be flexible if you have a supportive reference. You should be realistic in your applications and expectations. If your results in years 1 and 2 suggest you may be borderline 2:1/2:2, apply for the Masters that you really want if it requires a 2:1, but try to hang onto a fallback offer that will accept you with a lower second. Similarly, if you get a third, you may still be able to get into a perfectly respectable Masters programme, but you will probably have to be flexible about where you go and what you do, and it is unlikely that having the Masters will get you a place on a medical course.

*A note about doing a PhD with a 2:2 and a Masters*: If you are very keen on doing a PhD but get a 2:2, don’t give up. Formally, with a 2:2 and a Masters you are eligible for PhD funding, though you are unlikely to get a place on a prestigious programme such as that run by Cancer Research UK. However, if you have performed very well on your MSc project, your supervisor may like to keep you on to do a PhD, or will give you a good recommendation to work with someone else. It is also sometimes possible to take an indirect route into a PhD via a lab job such as a research assistantship.

**Applications**

There is no UCAS equivalent for Masters or PhDs. You have to apply directly to the institutions. This has the advantage that you can make as many applications as you like, but you need to be careful about the time involved.

Good websites for advertising Masters and PhD places are:

Find a Masters ([http://www.findmasters.com](http://www.findmasters.com))

Find a PhD ([http://www.findaphd.com](http://www.findaphd.com))

These are linked sites that include advice and information, as well as advertised Masters and PhD places.

Another excellent site for information on PhD places is [http://www.jobs.ac.uk/phd](http://www.jobs.ac.uk/phd)

In the Careers Library we also have copies of the *Prospects Funding Guide* which are free to take away, and useful for searching for both courses and funding.

*New Scientist* also has a good on-line jobs and courses section, and browsing through the back section of the journal gives you a good feel for what is available. We normally have copies of this available in the Careers Library.

It is possible to make a ‘speculative’ application for a PhD place: that is, send your CV to someone whose research interests you, and ask if there is a possibility of doing a PhD in their lab. They may have some funding available, or be prepared to apply for funding on your behalf. However, do target your letters carefully: do your research and show in your letter that you understand what the lab is working on. Don’t write the same blanket letter to 20 different labs. Also remember that famous researchers are likely to receive a large number of such letters, so look for alternative labs that are working in the same area. (Perhaps look for former post-docs of the famous researcher who are starting out in independent research. You may well get more ‘nurturing’ from them than in a huge ‘factory’ lab).

Whether applying for a PhD or a Masters, be prepared to write a short personal statement explaining your background, and why you are making this particular application. It may be helpful to provide a copy of this to your referees (see the section on *Referees* below).

**Dates and deadlines**

As there is no UCAS equivalent, there is also no single deadline for applications. Prestigious PhD programmes often have early deadlines (November), but others are later, and individual places continue to come up even after degree results are out. Still, for the best choice, look and apply early. Likewise, although Masters programmes may not advertise a strict deadline, the best choice is for early applicants. The winter vacation of your final year is a good time to start researching your Masters application. For a PhD, start looking in the autumn semester, but if you haven’t started your search yet, don’t despair, there is still a good chance of a place.

You may hear that there is no need to sort out a Masters place until you get your degree result, but we wouldn’t advise you to leave it so late, even if you are unsure what you want to do. Researching your options in good time will help you to decide whether and why you really want to do a Masters, and to choose the right one. MSc places have been going at a fast speed in recent years. This may be because of the recession: fewer graduate jobs have driven more graduates to enter postgraduate study.

**Referees**

Most applications require two references. It is expected that your personal tutor will write one, and s/he should be prepared to do so, provided that a) you have shown up to meetings with your tutor during your time at College and b) you ask permission and provide them with the information they need to supply the reference in good time.

For a PhD, your second referee should ideally be someone who can comment on your ability or potential in the lab e.g. your lab project supervisor. If you haven’t started your lab project by the time you put in your application, you could ask a summer studentship supervisor or extramural year supervisor instead.

For a Masters, your second referee might also be a project supervisor. If you are doing a literature-based project and have had several meeting with your supervisor s/he will be able to comment on your reliability, capacity for independent work and writing ability, all relevant to a postgraduate course.

If your project supervisor is not a suitable second referee, then you can ask any other academic staff member who knows you and your work. The senior tutor or programme coordinator for your BSc will usually be prepared to supply a reference. Academic referees are usually preferred to work referees, unless your work experience is directly related to the programme you are applying for.
Please help your referees, particularly if they don’t know you very well, by providing information about yourself (perhaps as a CV, or a copy of your application). They may ask you for a meeting to discuss your application and the reference, so be prepared and reply promptly if asked. You should give referees clear information about the programmes you are applying for, the process of supplying a reference for each application (e.g. on line, by letter direct to the Institution, by letter that you send on to the Institution) and important deadlines.

It is also polite to inform your referees of the outcome of your applications and thank them for their help: a brief e-mail is fine.

**Interviews**

Many universities have Masters and PhD open days. You may not be interviewed for a Masters place, but you should certainly take the opportunity to visit if possible. If there is no open day, or it has already passed, ask if it is possible to visit at another time.

You should definitely be interviewed for a PhD place, and you should take the opportunity to find out as much as possible about the place you will be working in. You should be given the chance to speak to current PhD students and post-docs (preferably without the supervisor present), so do ask them questions about the supervisor, the lab and the department e.g. Do they get enough advice from their supervisor? Do they have regular lab meetings? Do they interact with other labs? Is there a good seminar programme? Is there a good social programme? Remember that you will be spending the next 3+ years in this environment, so it’s important that the place feels right to you.

**Offers**

Having an offer is your goal, but it can present dilemmas. You may be pressed for a quick decision, which can be tricky if you are waiting for a preferred option. In that case, always ask for more time, and then ring round your other choices to check on the status of your application. If you do have to accept a PhD place that is not your first choice, and then your first choice comes up later, it should be possible to withdraw from the accepted offer. Obviously, it won’t make the place you withdraw from happy, so you should think carefully before doing so and give maximum possible notice (as well as being very sure that you have the alternative offer). If you do have to withdraw, remember that your potential supervisor has almost certainly met and coped with this situation before, and that trying to make the best choice should not be held against you.

Previously, it has been possible to hold several offers for Masters programmes and withdraw at a late stage without penalty. Now, certain institutions are trying to avoid losing students by asking for a non-refundable deposit against fees when you accept a place. If that happens to you, make sure you understand the terms and conditions properly before parting with your money.

**Further Resources**

Further resources can be found on Careers Tagged (www.careerstagged.co.uk) our online careers resources library.

When searching on Careers Tagged enter tags that relate to the resources you are looking for, for example

**POSTGRADUATE STUDY, LIFE SCIENCES, MASTERS, PHD**

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