

School of Natural and Computing Sciences
Chemistry

Information for Postgraduate Research Students



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Chemistry

Information Booklet for Postgraduate Research Students

1.0 Welcome

Welcome to Chemistry at the University of Aberdeen. Chemistry has been taught here for more than 200 years, and Chemistry has a modest claim to fame in that Aberdeen was probably the first university to introduce Chemistry as a subject in its own right, rather than as an ancillary to medicine. Chemistry is presently in a state of lively evolution, with a stimulating mixture of experienced and younger staff engaging in a wide range of research activities, essential for the wellbeing of any progressive discipline. Postgraduate students are of vital importance to this research, and we aim to support and develop your skills throughout your time here - both subject specific skills and generic skills.

You should have received from the Postgraduate Research School and other sources much information concerning University-wide procedures, facilities and support services. The purpose of this booklet is to provide you with important Chemistry-specific information which will help you get started as a research student in Chemistry. Please take time to read the booklet and keep it safely for future reference. The general information for research students is updated throughout the year and appears on Postgraduate Research School website: <https://www.abdn.ac.uk/pgrs/>

2.0 Introduction to the Chemistry and Postgraduate Research School Induction

When you arrive in Chemistry you should go to the Postgraduate (PGR) office to collect several forms you must complete. It is important that these forms are completed as soon as you arrive in Chemistry, after you have visited Infohub in the High Street, Old Aberdeen. More general information on the induction can be found at: <https://www.abdn.ac.uk/pgrs/>

Your Supervisor should introduce you to the secretarial staff and other relevant persons (see section 3.0) as part of your introduction to Chemistry. It is important that these people know who you are. They will provide you with keys; arrange to have your name added to student lists, telephone lists etc. Your Supervisor should also take you on a tour of Chemistry so that you see the scope of work that we do and the range of facilities that we have. (Take a look too at Chemistry's web site at <http://www.abdn.ac.uk/ncs/departments/chemistry/index.php>. A Staff list is provided at <http://www.abdn.ac.uk/ncs/people/chemistry-staff-243.php>

Each year the Postgraduate Research School organises an induction programme for new postgraduate research students, it is **essential** that you attend the main event. Please also look at the Postgraduate Research School Handbook which can also be found at <https://www.abdn.ac.uk/pgrs/>. We suggest you explore this Handbook early on to audit what is contained there. Some of the information you will not need right way but at least you will know where to find it when it does become relevant.

Access. The Meston Building is open normally between 7.30 and 18.00 on weekdays with access by both entrances. Between 18.00 and 23.00 on weekdays, and between 8.00 and 23.00 at weekends and public holidays, access is only by the North side entrance and is restricted to card holders unless there is a meeting or class scheduled. Your card will need to be activated before you may gain access.

3.0 Useful contacts

You are bound to have lots of questions when you first arrive. Please ask them - you will find that people will be happy to help you if they can. Your Supervisor is likely to be the first person you ask about most things, but other people may be able to help as well. The following names and telephone numbers might be especially useful, particularly in your early days:

Mrs. Lynn Harrison, Senior Secretary, ext. 2052, ncspgr@abdn.ac.uk

Mrs Harrison is in charge of the administration relating to postgraduate research students and will help you with all sorts of practical matters. You must register and complete necessary paperwork with Mrs. Harrison when you arrive. She also issues office keys.

Mrs. Jan Walker, Technical Resources Officer, ext. 2942, jan.walker@abdn.ac.uk

Mrs Walker oversees all Chemistry technical staff, provides support for financial matters (purchasing, budgets).

Dr Hai Deng, ext. 2953, h.deng@abdn.ac.uk

You may have dealt with Dr Deng during the application process. In addition to handling applications, he coordinates postgraduate matters in Chemistry, including lectures, seminars, and annual reports.

Professor John Storey, Head of Chemistry, ext 2926, j.storey@abdn.ac.uk Professor Storey oversees research within Chemistry, including postgraduate research students.

Contact details of Chemistry staff and telephone lists can be found [at http://www.abdn.ac.uk/ncs/people/chemistry-staff-243.php](http://www.abdn.ac.uk/ncs/people/chemistry-staff-243.php)

There is also a University Staff Directory for academic staff, postdocs and research postgraduates at: <http://www.abdn.ac.uk/directory/>

There is also a University Student Directory for undergraduates and taught postgraduates at: http://www.abdn.ac.uk/central/contacts/stud_list.php

4.0 Support facilities

The University is keen to help you successfully complete your studies. If at any time you feel you need assistance, there is a range of support services available to help you. These include support to help with unexpected and/or exceptional financial difficulty, support for disabled students and academic learning support through the Student Learning Service (<http://www.abdn.ac.uk/sls/>). Further details about all these services are available at <http://www.abdn.ac.uk/infohub/support/advice.php>. Chemistry has appropriate general support services and facilities which you can use to help you in your research. Your Supervisor(s) will know which of these facilities are appropriate for you to use. However, you should be aware of the following at the start of your studies.

4.1 Computing facilities

University computing facilities are provided by the University's Directorate of IT (DIT). Before you can use the Universities computers or access the network from any computer in Chemistry, you must complete an electronic registration process.

You will be required to agree to abide by the Conditions for Using Information and Technology Facilities (see <http://www.abdn.ac.uk/dit/>). The Computing Centre will provide you with information concerning the wide range of facilities and services on offer. You may for example be interested in attending one or more of the short courses on offer (see <http://www.abdn.ac.uk/it/services/training/>) for details), and this can be recognised as part of your postgraduate training.

You should also be aware that all purchases of computing equipment and consumables must be made through DIT (this is an EU requirement).

Any PC provided for your use will have a suite of Chemistry and general purpose software installed. There is also additional software that may be accessed from <http://www.abdn.ac.uk/it/student/pcs/sds.php>. Installation of other software will need the assistance of DIT but you should have a licence for any software that requires one; it is not acceptable to borrow your friend's copy of a program and install it on your machine. Please do not install games, fancy screensavers, shopping programs, etc — these are all very likely to be infected with viruses, adware or spyware, all of which will put your work at risk. It is also essential that you do not disable the anti-virus software which is installed for protection of your computer and the network.

4.2 Technician support and workshop facilities

The Technical Resource and Finance Officer for Chemistry is Jan Walker. All technical and finance queries, central workshop support requests, or indeed all miscellaneous requests should be addressed to Jan in the first instance, whose contact details are on page 3.

Other Technicians who you may require assistance from are:

Norma Thomson, Stores Technician, Stores B76, Tel. 2951, e-mail n.thomson@abdn.ac.uk Emanuele

Porcu, Stores Technician, Stores B76, Tel. 2951, e-mail e.porcu@abdn.ac.uk

Brian Paterson, Thermal Analysis Technician, Room G79, Tel. 3804, e-mail b.paterson@abdn.ac.uk

Russell Gray NMR Technician, Spectroscopy Suite, Marine Biodiscovery Centre, Tel. 2896, e-mail r.gray@abdn.ac.uk

Paula Craib, Glassblowing Technician, Room O27, Tel. 2932, e-mail p.m.craib@abdn.ac.uk See below for more details.

The remaining technical staff are primarily involved in undergraduate teaching.

General technical services

Mechanical and Electrical Services. These services are now provided by the Engineering and Physical Sciences Workshop (The Workshop), which is based on the Lower Ground Floor in the Fraser Noble building. Requests for work to be done should be placed with Mrs Jan Walker. Forms must be signed by Jan or her appointed deputy.

Glass-Blowing Workshop (Mrs Paula Craib, lower ground floor, Room O27, 2932). The work involves the construction of complicated pieces of glass apparatus, such as grids for doing chemistry with gases, and repairing broken items of glassware. In the interests of safety and efficiency, prospective users should consult Mrs. Craib during a daily contact period (9.30-10.30am).

Bottled Gases, Dry Ice etc. (see Mrs Jan Walker). Students requiring gases should make an appropriate entry in the request book which is kept outside the stores. Liquid nitrogen is available from the loading bay one level above the stores.

Ice machine. An ice-making machine for research purposes is located on the lower ground floor, Room O87, near to the Marine Biodiscovery Centre.

Cold room and deep freeze. There is a cold room in Chemistry, located on the ground floor, just outside the Japp Laboratory. A deep freeze is situated in the corridor near this, just opposite the lift.

Maintenance. Problems such as burst or leaking pipes, blockages in the plumbing, lights requiring to be replaced, should be reported to Mrs Jan Walker (2942), or to the Attendant at the reception desk at the North Entrance (Tel. 2954).

Stores. (Norma Thomson & Emanuele Porcu, Basement, beside lift, Room B66, 2951). The teaching laboratories have their own stores, which supply the needs of most undergraduate students. Honours students, postgraduate students and staff use the main stores to obtain chemicals and equipment. Each new user will be given an account number, so that a record can be kept of all withdrawals. Details on opening times will be given regularly.

4.3 **Photographic and reprographics facilities**

The reprographics section can be found in the University Library (<http://www.abdn.ac.uk/uniprint/>). This section can assist with colour printing, photocopying, photography, lamination - in particular preparation of laminated A0 posters for conferences. This service is also in charge of hard-binding for your final thesis. Remember again that your Supervisor will need to authorise any requests as materials have to be charged to a budget held by your Supervisor.

4.4 **Incoming Mail**

PG students' incoming mail is distributed into the pigeonholes situated outside Meston 058. Please make sure that you check these regularly.

5.0 **Health and Safety**

Chemists and other scientists must learn to work safely as a very important part of their professional training. Chemistry has a commitment to effective management of health and safety. It has to satisfy the requirements of health and safety legislation as well as the requirements of the University Court (as set out in the University's Health and Safety Policy). To this end the Chemistry Safety Committee has produced a Safety Handbook. The Handbook covers the responsibilities of staff and students in respect of health and safety, what to do in the event of fires or accidents, Chemistry rules in respect of Health and Safety, Chemistry practice in corridors, offices and labs, working with chemicals, compressed gases, flammable liquids, lasers, etc.

All users of University premises and property must comply with the regulations of the Health and Safety at Work Act (1974). Chemistry's advice for compliance with these acts is given in the Safety Handbook. **As a new research student to Chemistry you are required to read the Chemistry Safety Handbook and attend the Safety Induction Lecture.** A copy of the Handbook is kept in each laboratory and it is also available on Chemistry safety web site at <http://www.abdn.ac.uk/ncs/information/chemistry-200.php> If you missed the safety induction lecture, you must watch the recorded version also available on this Chemistry safety Website before commencing work. This website also contains links to important forms such as Risk

Assessments, and places where you can find Material safety Data Sheets (MSDS).

Dr Rainer Ebel is the Chemistry Safety Adviser to whom any other safety matters should be reported, and Dr Bill Harrison is the Chemistry Radiation Supervisor.

5.1 Food and Drink

Of course, eating and drinking in labs is strictly forbidden! However, the coffee room is open to all staff and postgraduates. You can purchase coffee/tea/soup/etc from a machine in the area outside the coffee room or you can make your own drink and bring it along. We would like to see more postgraduates using this room during the morning and afternoon breaks so please do come along and bring your office mates with you. It is a chance to meet people from other groups in an informal setting. There is a kitchen that can be used for heating food and drinks, but this must be kept scrupulously clean. The student Chem Soc runs coffee mornings on most Thursdays.

There is also a coffee shop in the foyer of the University Library and in Crombie-Johnson for take-away drinks and snacks. Shops on the High Street sell sandwiches and snacks. You can also purchase snacks and hot meals in The Hub (<http://www.abdn.ac.uk/staffnet/working-here/the-hub-454.php>).

6.0 Absences due to illness/Good causes and Tier 4 Responsibilities

If you need to take time off for illness or have to take time off for other good causes, then it is sensible to inform your supervisor(s) and Lynn Harrison in Meston G05D, even if it's just for one day. You must hand in a medical certificate as soon as possible. For absences of 7 days or less you should fill in a Self-Certificate (available from the office). Longer absences should be supported by a medical certificate from your doctor. Extended absences could have an impact on your ability to finish your PhD on time, and therefore this procedure acts to protect you - extensions can be granted *where there is good cause*.

International students on a Tier 4 visa are reminded of the need to sign in with Lynn Harrison on a monthly basis.

If you are on a Tier 4 visa and intend to be away then you must complete an authorised absence form available from Lynn Harrison in G05D.

7.0 Postgraduate Training

We believe that you would not be well served if all you did was to work in a laboratory for the duration of your degree. Thus, in addition to the progress assessments described above, we expect all PhD students to:

- 1) *attend lecture courses* - all students in years 1 & 2, including MSc students, must attend two lecture courses from the choices given and carry out in-course assessment. Information is distributed in September each year - the choice is limited so that you may have to choose courses outside of your own specialist area. You may also choose appropriate courses from other disciplines, with the permission of your supervisor and the Postgraduate Research Coordinator.

- 2) *keep a training record* - a record must be kept detailing training on equipment and major techniques. In addition, Risk Assessment forms must be filled in and kept up to date. You must also complete a Health and Safety Induction Form.

- 3) *present a poster on your work* – in your 1st and 2nd years you will present your work in poster format a special poster session organized in April every year. There is a prize for best poster – a contribution towards conference attendance.

4) *give chemistry seminars*. 3rd year students give a 20 minute seminar at a 1 day symposium in June to all research students and staff. This is considered an important part of your overall training. As many postgraduate students will get the chance to present their work at national and/or international conferences this provides excellent preparation - it is also a valuable opportunity to find out what else is going on in Chemistry - and to get wider input into your research! All postgraduate students are expected to attend this symposium.

5) *attendance at general lectures* - including Chemistry lectures, RSC lectures and the postgraduate seminars. These are compulsory; Chemistry lectures usually take place at 12 noon each Wednesday, whilst RSC lectures take place on Wednesday afternoons. Both are advertised well in advance.

6) *participate in research group meetings* - most research groupings have group meetings, which allow you to discuss and present your work in a more informal setting than in seminars - and to allow you to perhaps help other people as well. In addition, as you progress, you will be expected to participate more in assisting new students, particularly helping them to use equipment.

7) *complete mandatory courses* - there are four compulsory training courses to be undertaken. **IT Security Awareness and Research Data Management, Research Ethics and Governance, Equality and Diversity and Health and Safety.**

7.1 Demonstrator Training

In addition, there is the opportunity to become involved in undergraduate demonstrating. As you will receive payment for demonstrating, it is important to recognise that you will need to make up the time lost, and that it does not substitute time spent on your research project.

If you are planning, or have been asked to carry out tutoring and demonstrating work, please contact Dr Peter Henderson. He will advise you about any preparation that is required before you undertake paid work of this kind. Initially, prior to assisting in the teaching laboratories, we expect you to shadow an experienced demonstrator for 1 half session (12 week lab session – typically a minimum of 6 laboratory sessions).

7.2 Generic Training

There is information on the Postgraduate School website about Training and Development see <https://www.abdn.ac.uk/pgrs/training-development/index.php>

7.3 Planning your Development

There is information on the Postgraduate School website about Planning your Development see <https://www.abdn.ac.uk/pgrs/training-development/planning-your-development-418.php> this also explains about the ‘**initial skills audit**’ which will be sent to you within the first few months of your studies.

8.0 Progress Monitoring

The progress of your studies is monitored formally by Chemistry and by the Postgraduate Research School. Please see Milestone and Timelines <https://www.abdn.ac.uk/pgrs/>, please review the timeline based on the length of your project. Supervisors will monitor progress by various mechanisms which are specific to them, e.g. by regular meetings, short written reports, oral presentations to research group, etc. The overall objective is to ensure that you are making good progress towards completing your programme satisfactorily within the period of supervised study.

University monitoring of your progress

The Postgraduate Research School issues 'Routine Monitoring Forms' at regular intervals (see timeline mentioned above) for every research student until the thesis has been submitted. The form is designed to allow the Supervisor(s) to summarise how well you are progressing. There is space on the form for you to comment. The completed form is held with your file in the Postgraduate Research School and copies are kept in Chemistry.

Chemistry considers the Routine Monitoring Forms to be an extremely important part of its mechanisms for monitoring the progress of its research students. It is important that Supervisors and students use the form to flag problems affecting progress. When matters affecting satisfactory progress are identified on the form a meeting is arranged with the Head of Chemistry to discuss ways to remedy the situation.

8.1 *Departmental monitoring of your progress*

For PhD students, progress is assessed on an annual report (9 month/21 month) and oral examinations based on the reports. The report must be submitted by the end of June each year and is then examined by two internal examiners.

As well as assessing progress, the examination intends to give students practice for the final *viva voce* examination which takes place after submission of your thesis. It also allows you to interact, in an examination setting, with academics who are likely to be your internal examiner for the *viva*. The annual oral exams are, however, intended to be somewhat more informal in nature, and frequently involve the student giving a short presentation to highlight their main results.

We also hope that the process allows you to get some varied input into, and a different perspective on, your project from academics who may not be otherwise involved.

8.1.1 *End of Year Reports for PhD Students*

For students at the end of their **first** (9 months) and **second** (21 months) year:

A 20 page (approx.) report including literature review, results and discussion to date and future work plan. This will be assessed by two internal examiners - see section below on assessment.

You should NOT spend too long on writing these reports - there have been cases where students have spent several months "perfecting" a report! They should be completed by the end of June to allow assessment before the new semester starts.

Assessment pdf electronic versions should be submitted to the PG Secretary Office with the names of the two examiners appointed by your supervisor(s). Your reports will then be passed to your examiners who will contact you within a month to agree on a date for an oral examination. Post-doctoral fellows/assistants can be appointed assessors.

The assessors will then conduct a *viva voce* examination, with one assessor acting as "external", the other as "internal" so as to mimic the final *viva*. During the *viva* the student may wish to present a short talk summarising their main results. The exam should not last more than an hour.

After the oral exam:

1. Examiners should complete a report form, which should be given to them.
2. The supervisor(s) should then add their report.
3. The student will receive a copy of the report form.
4. The student should complete their part of the form, on which they can make comments regarding the oral, or any other aspects of their study over the session
5. The supervisor should submit a copy of both reports to the PGR office, where they will be held in the student's file.
6. The Head of School signs the examiners' report.
7. The examiners' report goes to the Graduate School.

Please note that this procedure is continually being revised to ensure speed and effectiveness.

8.1.2 Postgraduate Symposium

As part of the postgraduate training program there will be a Chemistry final year postgraduate symposium in June each year. Final year PhD students will present a 20 minute talk (+ 5 minutes for questions) on their work to research students and staff in Chemistry. This will be run in a "conference style" so good time-keeping is absolutely essential. 1st and 2nd year PhD students will present a poster on the same day. There is a prize for the best 1st and 2nd year poster – a financial contribution to conference attendance sponsored by the local section of the Royal Society of Chemistry.

The main aims of presenting at the symposium are:

1. to give all students practice in presenting their work to a general chemistry audience;
2. to encourage "cross-fertilisation" of ideas across Chemistry and interaction between research groups.

Thus this should not be treated as a dreadful ordeal – it will not be assessed, though if you wish we can give informal feedback.

Points to bear in mind are:

1. introduce your subject at an appropriate level for a general chemist;
2. present an appropriate selection of literature and results – you don't have to tell us everything you have done!
3. keep strictly to time.

Confidential Projects Many projects that are sponsored by industry are confidential in nature and thus specifics of research cannot be disclosed to a general audience. In these cases, details may be omitted, or you may choose to concentrate on generalities rather than specifics of your research.

Please notify PG Co-ordinator as soon as possible if you fall into this category. Please also advise the office when you submit your thesis for the Chemistry library.

Attendance Attendance at the postgraduate symposium is **compulsory** for **all** postgraduate students. Staff should make every attempt to attend the symposium, not only those of their own students.

9.0 Postgraduate Committee

Comprises PG Co-ordinator and Head of Chemistry with representatives from each postgraduate year. The committee meets twice per academic year and the output from these meetings are fed into the Chemistry Staff Meetings.

10.0 Codes of Practice for Supervisors and Research Students

The University has produced a code of practice which describes the responsibilities of the Supervisors as regards supervising postgraduate students who are taking a degree by research, and the parallel responsibilities of the students. It does not state or replace regulations, but does attempt to summarise the University's practice. Most of this information can be found on the Postgraduate Research <https://www.abdn.ac.uk/pgrs/pgr-engagement/index.php#panel520>.

Supplementary Regulations for Postgraduate Degrees can be found at <https://www.abdn.ac.uk/pgrs/pgr-handbook/supplementary-regulations-for-postgraduate-degrees-83.php>

10.1 Plagiarism

Plagiarism is strictly forbidden and cases are treated very seriously. All students producing reports and theses should therefore be aware of the following:

"The definition of Plagiarism is the use, without adequate acknowledgement, of the intellectual work of another person in work submitted for assessment. A student cannot be found to have committed plagiarism where it can be shown that the student has taken all reasonable care to avoid representing the work of others as his or her own."

However, the following use of tables/graphs is permissible:

1. Provided the table/graph etc is used in the context of criticism, review, comparison etc then it is quite acceptable, under normal copyright legislation, to include it in a PhD thesis. It should be properly acknowledged in the bibliography (and in the text as appropriate).
2. Must not manipulate the content (e.g. cannot present it in a different format of table) as this breaches the moral rights of the copyright owner.
3. Allowed to analyse the data and then present it in a different way e.g. histogram rather than a pie chart provided the original format is provided (preserves the moral rights) and a statement is made along the lines of "additional analysis of the figures can also be presented in such and such a way and from this it can be seen ..."
4. This all falls under fair dealing.
5. Only need to worry if normal copyright does not apply (e.g. statement on a research paper that states "only with permission" or something similar), or if special licensing operates for a particular information supplier. So, the potential user should check for copyright statements or licensing conditions and if these not obvious assume normal copyright applies (first bullet point above)
6. Generally, no trouble for published peer-reviewed papers, but there will be issues with other web-based information.

Be aware that Staff members can/will check your reports/Thesis for possible plagiarism using the TurnitinUK software (<https://turnitin.com/static/index.php>)

11.0 Submission and Examination of Theses

There is advice on the Postgraduate Research School website <https://www.abdn.ac.uk/pgrs/pgr-handbook/submission-of-theses-85.php>

11.1 Researcher Sign-off Form

Although your supervisor is in charge of your research, you are responsible for keeping your research area in order throughout your PhD. This includes computing, papers, files, books as well as chemicals, glassware, etc. At the end of your PhD you should make sure that all aspects of your research are completed, including return of chemicals and glassware to the stores, return of keys, storing of samples, filing of papers and lab books and other details as outlined in the researcher sign-off form. Only once this has been done satisfactorily will your supervisor sign the form which will then allow you to undergo your *viva voce* exam.