



Department of Mathematical Sciences

Postgraduate Research Students

Handbook

Academic session 2015-2016

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I. Introduction

Welcome to the University of Aberdeen as a postgraduate student. Postgraduate students are of vital importance to current pure mathematical research and the future health of the field, and so we attach great value to the Ph.D. students in this department. Postgraduate study in mathematics can be both challenging and rewarding. We aim to support you and develop your skills throughout your time here – both subject-specific skills and generic skills. This handbook should help you to get to know the department and the university, and provide you with guidance about being a postgraduate student.

You will have already received from the Postgraduate Registry and other sources some information concerning University procedures, facilities and support services. University-wide policies, procedures, and regulations can be found in Section 8 of the Academic Quality Handbook:

<http://www.abdn.ac.uk/staffnet/teaching/academic-quality-handbook-838.php>

In particular, please refer to this handbook for information about the Ph.D. thesis and viva voce examination. Also see the Code of Practice for Postgraduate Research Students at:

<http://www.abdn.ac.uk/staffnet/teaching/aqh/appendix5x4.pdf>

The purpose of this booklet is to provide you with important Maths-specific information which will help you get started as a research student in Mathematics. Please take time to read the booklet and keep it safely for future reference. Information is updated throughout the year on the college postgraduate web pages:

<http://www.abdn.ac.uk/cops/graduate/about-212.php>

II. About the Department of Mathematics

Aberdeen's Department of Mathematics is a department of 14 academic staff (plus 2 emeriti), whose research focus is primarily pure mathematics, especially Algebra, Analysis, and Topology. Interactions with applied mathematics are fostered through our involvement in the Institute for Pure and Applied Mathematics, comprised of the Department of Mathematics together with the Institute for Complex Systems and Mathematical Biology (located in the Meston Building).

II.1 Departmental activities

During term-time, there are two weekly departmental seminars:

- Topology Seminar: Mondays, 4:15-5:15 pm, and
- Algebra Seminar: Thursdays, 4:15-5:15 pm.

An Analysis Seminar is held occasionally.

Both of these are held in the Maths Seminar Room, FN156. A departmental tea occurs prior to the weekly seminars, and when the speaker is external, they will generally be taken out for dinner. Depending on your research area and guidance from your supervisor, you might find it beneficial to attend all or some of these seminars.

The department hosts an annual Potter Lecture, delivered by a prestigious international mathematician.

Aberdeen frequently hosts other meetings, such as:

- Scottish Topology Seminar,

- Scottish Operator Algebras Seminar,
- meetings of the UK network in Applied Algebraic Topology,
- meetings of Algebra and Representation Theory in the North, and
- meetings of the Edinburgh Mathematical Society.

II.2 Computers and printing

The college will provide you with a basic desktop computer at the beginning of studies. Your supervisor should contact Lynn Harrison with your name, your room and the network socket number. The computing officer is Michael Chung, and he will be able to help with computing issues including software installation.

University computing facilities are provided by the IT Services. Before you can use the University's computers or access the network from any computer in Mathematics, you must complete the electronic registration process. More information is available at: <http://www.abdn.ac.uk/ereg>

You will be required to agree to abide by the Conditions for Using Information and Technology Facilities (see <http://www.abdn.ac.uk/it/>). 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).

Students will receive a University e-mail account. The University will normally use e-mail to communicate with students during term-time and messages will be sent to their University e-mail account. It is the student's responsibility to check e-mail on a regular basis (at least weekly) and to keep their mailbox tidy to avoid going over quota.

You will be able to print with your computer. By swiping your student card on the reader next to a printer, you will be able to have the printer print your documents. Printers can be found along the corridors of the Fraser Noble Building. You may also use these printers to scan or make photocopies.

II.3 Mail pigeonholes

There are mail pigeonholes in a locked cabinet in the maths lounge, and a key will be provided to you. To send mail (internally or externally), there is an outgoing mail tray in the mail cabinet. The cabinet also contains keys for the stationary cupboard, which is also in the maths lounge.

II.4 The seminar room

The departmental seminar room is room 156. Weekly seminars are generally held here, as well as yearly report presentations (see III.4 (c)) and viva voce examinations. The room may be booked using Microsoft Outlook Calendar or by contacting Sheryl Mackay.

II.5 The lounge

In the centre of the department (adjacent to the seminar room) is a lounge. A coffee machine is available for your use, either by paying 25p per coffee or by a £5 monthly subscription. The coffee officer is Mark Grant, who you may speak to if you are interested in a monthly subscription.

The kitchen area and the dishes within are for the use of everyone in the department. Bearing this in mind, please keep the area tidy and please return and clean any dishes after using them.

II.6 Health and safety

In case of a fire, sound the fire alarm by operating the nearest break glass fire alarm call point. These are situated in corridors or near fire doors into stairwells. Inform Fire and Rescue services by dialling 999 from a safe location (9-999 from a University landline). Leave the building by the nearest fire exit and report to the Fire Marshal (wearing a high visibility fluorescent vest).

The fire alarm in the Fraser Noble Building is a continuous siren heard throughout the building. Upon hearing it, leave the building by the nearest fire exit.

There are two fire exits nearby to the Institute of Mathematics: one is by the stairwell to the south of the Institute (this exit is the quickest way to the Hub), and the other is by the stairwell to the north of the Institute.

The first aiders in the Fraser Noble Building are:

J. Adamson, room 119, ext. 2563

J. Clark, room 175, ext. 4207

G. Cordiner, room 031, ext. 2788

S. Middleton, room 178, ext. 3219

The First Aid Room is FN068. First aid kits are held in the First Aid Room, College Office, and Workshops.

II.7 Contacts

You are bound to have a lot 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, Meston G05F, ext. 2052, l.harrison@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.

Prof. Ran Levi, PGR Director, FN138, ext. 2753, r.levi@abdn.ac.uk

You may have dealt with Prof. Levi during the application process. In addition to handling applications, he coordinates postgraduate matters in Mathematics.

Dr. Assaf Libman, Head of Mathematics, FN136, ext. 2613, a.libman@abdn.ac.uk

Dr. Libman oversees the department. He will assign your tutoring duties.

Mr. Michael Chung, Computing Officer, Meston 202, ext. 2750, m.chung@abdn.ac.uk

Mr. Chung helps with computing issues.

Mrs. Sheryl Mackay, Senior Secretary, Teaching Office (Meston G05D), ext. 2605, s.a.mackay@abdn.ac.uk

Mrs. Mackay is the main secretary for teaching and tutoring matters. She can also help with booking the Maths seminar room.

III. Being a Ph.D. student

III.1 Registration and induction

When you arrive at the University you should go to the School Research Finance Office, Room G05F of the Meston Building where the postgraduate secretary (Lynn Harrison) will arrange for you to meet your supervisor and the Maths PGR director, Ran Levi.

Your supervisor should introduce you to the secretarial staff and other relevant people as part of your introduction to Mathematics. 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 the department. A staff list is provided at:

<http://www.abdn.ac.uk/ncs/departments/mathematics/people-164.php>

A formal introduction to the College of Physical Sciences will occur during the College of Physical Sciences Induction for new postgraduate students on the 14th, 18th, and 25th October 2016, in the Linklater Room of Elphinstone Hall. You will be given more information about Induction after your arrival.

More information can be found at the new students website: <http://www.abdn.ac.uk/newstudents>

III.2 Training

Graduate-level mathematics courses are provided by the Scottish Mathematical Sciences Training Centre. Commonly, in their first year, Ph.D. students take the modules in Algebra, Pure Analysis, and Geometry & Topology; however, whether this training is required depends on the background of the student. You will be informed whether you should be taking these modules.

III.3 Travel

Your supervisor will provide you with expectations about which seminars and conferences you should be attending, and whether to give talks at such seminars or conferences. For all study-related travel, it is important to arrange travel insurance cover. This is done by filling in the university's travel insurance application form: <https://www.abdn.ac.uk/staffnet/forms/travel-insurance-cover>

Yearly, the Edinburgh Mathematical Society hosts a two-day meeting for postgraduate students from all Scottish Universities at The Burn House near Edzell. These events provide an informal setting for students to meet each other. Participants are encouraged to give short talks on their research. We encourage students to attend these meetings.

III.4 Tutoring

Ph.D. students have the opportunity to do paid tutoring during term time (2 hours per week is

typical). As head of department, Assaf Libman assigns the tutoring duties, and he will communicate your duties to you. The course coordinator will provide you details of your responsibilities as a tutor. Additionally, College Induction includes a session on tutoring.

III.5 Monitoring

The progress of your studies is monitored formally by Mathematics and by the College of Physical Sciences Graduate School (<http://www.abdn.ac.uk/cops/graduate/index.php>). In addition, supervisors will monitor progress by various mechanisms which are specific to them, e.g., by regular meetings, short written reports, oral presentations to a research group, etc. Typically, you should be meeting with your supervisor at least weekly, and it is advised that you keep brief records of when you met and what was discussed.

The overall objective of monitoring is to ensure that you are making good progress towards completing your programme satisfactorily within the period of supervised study. A summary of the monitoring process is shown in the flowchart below (there is a separate one for part-time students, available at: http://www.abdn.ac.uk/cops/documents/PGR_Monitoring_Checklist_PT.docx). Details of the process with relevant forms can be found at:

<http://www.abdn.ac.uk/cops/graduate/monitoring-arrangements-251.php>

College of Physical Sciences

Full-Time PGR Monitoring Checklist

1 4 9 5



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At month 0	Initial registration	
At month 3	Return ' Initial Audit of Training/Skills for Academic and Professional Development Form '	
At month 6	Return ' Research Student Routine Progress Review Form '	
By month 9	Submit a report on your research	Provide account of engagement with specific and generic skills courses
	Complete part 1 of the ' Monitoring Research Student Progress First Year Assessment Form ' and include with submission to the relevant discipline/School authority	
At month 10	Interview/Viva and/or presentation on research work	Return completed ' Monitoring Research Student Progress First Year Assessment Form '
At month 18	Return ' Research Student Routine Progress Review Form '	
At month 21	Deliver a research presentation	Provide further evidence of course/seminar/conference attendance
	Complete part 1 of the ' Monitoring Research Student Progress Second Year Assessment Form ' and include with submission to the relevant discipline/School authority	
By month 22	Interview/Viva with possible report/paper	
At month 30	Return ' Research Student Routine Progress Review Form '	
At month 36	Return ' Thesis Completion Form ' (Form B)	
At month 42	Return ' Thesis Completion Form ' (Form B)	
At month 48	Return ' Thesis Completion Form ' (Form B)	

III.5 (a) University monitoring of progress

The College of Physical Sciences Graduate School issues 'Research Student Routine Progress Review Forms' at regular intervals (see flow chart on previous page) for every research student until the thesis has been submitted. The form is designed to allow the supervisor to summarise how well you are progressing. It is signed by the supervisor, the student and the College Postgraduate Officer. There is space on the form for you to comment. The completed form is held with your file at the Graduate School.

Mathematics considers these routine monitoring forms to be an important part of its mechanisms for monitoring the progress of its research students. It is imperative 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 Mathematics to discuss ways to remedy the situation.

III.5 (b) Departmental monitoring of progress

For Ph.D. students, progress is assessed on annual reports (at 9 months and 21 months) 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 assessors. When possible, the assessors for the 9-month report will be the same as those for the 21-month report.

As well as assessing progress, the examination gives students practice for the final viva voce examination, which takes place after submission of their 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, meant to be shorter and somewhat more informal than the viva.

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.

III.5 (c) End of year reports

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

A 5–10 page (approx.) report is to be written, including literature review, problems, and future work plan. As there is significant background required to commence pure mathematical research, it is not unusual to have only a rough idea of the research problem when writing the 9-month report. Just write about what you have been studying, and speak with your supervisor for guidance. The report will be assessed by two internal assessors – see section below on assessment.

You should NOT spend too long on writing these reports. They should be completed by the end of June to allow assessment before the new semester starts.

Assessment: The first and second year report assessment forms may be found here:

http://www.abdn.ac.uk/cops/documents/03_First_year_assessment_report_revised.docx

http://www.abdn.ac.uk/cops/documents/04_Second_year_assessment_report_revised.docx

Page one of this form should be filled out and returned, along with two copies of the report and a pdf electronic version, to the PGR Office (Lynn Harrison). Your supervisor should appoint two assessors (for the second year, this should be the same as the assessors from the first year, if

possible) and communicate this information to Lynn Harrison. Your reports will be passed to your assessors who will contact you within a month to agree on a date for an oral examination.

The assessors will then conduct a viva voce examination. During the viva it is recommended that the student present a short (approx. 20 minute) talk summarising their report. The entire exam should not last more than an hour. If the student wishes, their supervisor may attend the examination. It is recommended that the supervisor gets to see the student's presentation, either before the examination or by attending it.

After the oral exam:

1. Assessors should jointly complete the assessment form, which should have been given to them.
2. The supervisor should then add their report.
3. The student will receive a copy of the assessment 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, then sign the report.
5. The supervisor signs the assessment form and submits it to the PGR director (Aaron Tikuisis)
6. The PGR director and the Head of School sign the assessment form.
7. The assessment form goes to the Graduate School.

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

III.6 Personal development planning

Personal Development Planning (PDP) is a structured and supported process by which research students reflect upon their own learning, performance and/or achievement. The process has been specifically designed to provide support for students in planning their personal, educational and career development.

The process involves a range of approaches through which students can reflect on their experiences up to that point, identify goals for the future and record their achievements and skills development during their time at the University of Aberdeen. It also involves the development of generic skills such as managing your research project, writing reports and giving presentations. Courses are available to assist you in developing these skills. Detailed information on PDP and generic skills can be found at:

<http://www.abdn.ac.uk/cops/graduate/personal-development-planning-241.php>

<http://www.abdn.ac.uk/cops/graduate/generic-transferable-skills-242.php>

Generic skills training course can be found at:

<http://www.abdn.ac.uk/develop/develop>

Careers and employment information can be found at:

<http://www.abdn.ac.uk/cops/graduate/careers-employment-245.php>

There are also opportunities to get involved in public engagement with science events:

<http://www.abdn.ac.uk/cops/graduate/public-engagement-246.php>

III.7 Absences

If you need to take time off for illness, or for other good causes, then it is sensible to inform your supervisor and Lynn Harrison, even if it's only for one day. You must hand in a medical certificate

as soon as possible. For absences of 11 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 Ph.D. on time, and therefore this procedure acts to protect you – extensions can be granted where there is good cause.

If you are on a Tier 4 visa, and intend to be away for an extended period of time (more than one week) then you must complete an authorised absence form available from Lynn Harrison.

When a supervisor plans to be absent for an extended period (eg., for an extended research visit), arrangements, such as meetings by Skype, should be made between the student and supervisor so that the student's progress is not impeded.

IV. Codes of practice

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 Graduate School site at: <http://www.abdn.ac.uk/cops/graduate/student-responsibilities-239.php>. The full code of practice is available at <http://www.abdn.ac.uk/staffnet/teaching/aqh/appendix5x4.pdf>

IV.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 Senate-approved 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/her own."

The University's Code of Practice on Student Discipline is available at:
www.abdn.ac.uk/staffnet/teaching/aqh/appendix5x15a.pdf

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