



NUI Galway
OÉ Gaillimh

*SCHOOL OF
MATHEMATICS,
STATISTICS AND
APPLIED MATHEMATICS*

Postgraduate Handbook

1. Introduction

Welcome to the School of Mathematics, Statistics and Applied Mathematics at NUI Galway!

In this short handbook you will find some supplementary information, **specific to the School**, regarding your Postgraduate Degree by Research.

For all other aspects, please refer to the University Graduate Studies Office. In particular, you are requested to consult the following documents:

http://www.nuigalway.ie/media/graduatestudies/files/university_guidelines_for_research_degree_programmes.pdf

[Main source of information for all aspects of your degree here at NUI Galway, from the beginning to the end of your degree]

https://www.nuigalway.ie/media/graduatestudies/files/writingascientificstylethesis/writing_a_scientific_thesis.pdf

[Advice on how to write your thesis. Note that some pieces of advice might not apply to a mathematics/statistics/applied mathematics/bioinformatics-based thesis.]

https://www.nuigalway.ie/media/graduatestudies/files/phdvivaguide/phd_viva_guide.pdf

[A guide to the oral examination of your degree]

[Note: in what follows, “the School” is short for “the School of Mathematics, Statistics and Applied Mathematics at NUI Galway”.

2. First steps

- You need to obtain a **student card** and a student number following your enrollment at NUI Galway as a postgraduate student (talk to your supervisor about this).
- You and your supervisor should claim a **desk**. If you're going to be located in the Áras de Brún building, it will be easy to organize (talk to your supervisor). Otherwise, you'll be located in the Hardiman Building. Then, please fill in the form on this [webpage \(https://tinyurl.com/y4cd3q65\)](https://tinyurl.com/y4cd3q65) and also contact one of the School's Postgraduate student representatives (ask your supervisor for their name) to find out about the location of available desks. In the form, specify that your degree is with the College of Science, so that you're allocated a desk on the same floor as the other students. Note that you will be asked to renew the desk each year.
- Then ask the School Office to request out-of-hours **access** to the Áras de Brún and the Hardiman buildings, including access to the Postgraduate Room in Áras de Brún.
- If your funding does not cover **computer** hardware, please talk to the School Administrator Mary Kelly about possibly acquiring a desktop computer.
- Once you have an email address, you should join the seminar list of the School at <https://listserv.heanet.ie/cgi-bin/wa?SUBED1=NUIG-MATHS-SEMINARS&A=1>
- **Proof of address** is the main required document for most of registrations (GNIB, PPS, BANK, etc). You can visit <http://www.daft.ie> to look for accommodation and also rely on your fellow students for information.
- You need a **Personal Public Number (PPS)** and an **Irish bank account** to receive your scholarship and/or payment for your services. For a PPS number, go to Intreo Galway; for a bank account go to Bank of Ireland on campus or to any other bank.
- **Visa process:** If you come to Ireland on a visa, you must register in person with the Garda National Immigration Bureau (GNIB) after arrival and registration at NUI Galway, to obtain a GNIB card. Here is the link for further information: <http://www.inis.gov.ie/en/INIS/Pages/registration>
You can get more information from the NUI Galway International Office and from your fellow students.
- **For visa holders:** You must ensure that your visa allows you to receive payment for paid teaching duties. Eligibility for payment in this case must be confirmed before any such duties are undertaken.
- If you are new to Galway, the International Office has a lot of practical advice, so don't hesitate to visit them at 7 Distillery Road, see also <http://www.nuigalway.ie/international/>
- Finally, make sure that your supervisor(s) give(s) your details to the Director of Graduate Studies so that you are registered on, and have access to <http://schmidt.nuigalway.ie/schoolmaster/>, where you will find timetables and details of all academic and postgraduate members of the school.

3. Graduate courses

If you are registered in a “Structured” programme, you will need to take **graduate courses**. A Structured PhD student must complete 30 ECTS of modules over Years 1-3 of their PhD. Please consult with your supervisor(s) to select the most relevant modules for you. There are two main types of modules:

- Generic/transferrable/professional skills modules, which are assessed by your supervisor. See list at:
<http://www.nuigalway.ie/graduate-studies/currentstudents/gsmdules/gsmdules/>
 - Advanced discipline-specific modules. At the moment, students in the School can register for the modules listed below, but other modules can be added to the list (talk to your supervisor). See details on <http://schmidt.nuigalway.ie/schoolmaster/>,
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- MA216: Mathematical Molecular Biology II
 - MA324: Introduction to Bioinformatics
 - CS319-2: Scientific Computing
 - MA523: Advanced Course in Mathematical Sciences
 - MA530: Numerical Analysis 1
 - MA531: Numerical Analysis 2
 - MA5115: Supporting Learning in Mathematics
 - MP410: Nonlinear Elasticity
 - MP494: Partial Differential Equations
 - BME402: Computational Methods in Engineering Analysis
 - CE6106: Hydrological Modelling

4. Financial support for conference/workshop expenses

The School seeks to support approved conference participation of its **eligible** PhD students subject to available funding. **Eligible** means that the student does not have such funding support from his or her PhD scholarship. The School seeks to maximize the efficiency of this support and to ensure that it helps those students who need it the most.

For your application, and for approval,

- You are expected to explore and exhaust other sources of funding before you contact the School for support. For example, by asking conference organisers for a waiving of the registration fees or for a discount, or by entering competitive support schemes;
- You are expected to avail of the standard accommodation arranged by the conference/workshop and to incur reasonable travel expenses;
- Applications for events during the summer months (June – August) must be submitted to Mary Kelly by May 31st of the given academic year, and approved expenses must be claimed by September 15th of that year;
- Currently and subject to availability, the maximum funding available is €500 per eligible student each year;
- For your application, you must provide a written statement, approved by your supervisor. It must give the dates and location of the conference/workshop, outline its significance for you, and give a breakdown of the expenses. You must explain in writing how you have explored and exhausted other sources of funding for the trip.
- If the demand exceeds the available funding, the School will support students who are proposing a talk at an event over those who are proposing a poster and then over those who are proposing to be part of the audience only;
- Access to these funds is subject to availability each year.

5. Your responsibilities

You are required to provide **120 hours of unpaid teaching duties** to the School, see the School Policy at the end of this Handbook.

You are expected to **attend the School Mathematics seminar**.

You are asked not to provide grinds to students in the courses you are tutoring, as this might create a conflict of interest. If you are approached by students about this, please refer them to your fellow postgraduate students.

The annual meeting of your Graduate Research Committee (GRC) usually takes place in May. For the meeting of your GRC, you are asked to **prepare a report** (the GS030 form) and **a short presentation** (typically 15 minutes) of your results and your activity so far.

The School showcases its research activity every year (usually in May) with a one-day event. You are requested to **produce and present orally a poster** at each and every Research Day during your degree.

- If your funding has a provision for research expenses, please use it to cover the cost of printing your poster.
- Otherwise, please contact the School Administrator in advance to make sure the School can cover the cost.
- You are also strongly encouraged to propose a talk at Research Day.

The School proposes and takes part in many Outreach and Communication activities. You are requested to **give two hours of your time per year** to one or both of the School's TYFridays and Mathematics Enrichment programmes. Please contact the School's Outreach and Communication committee for details.

If you are planning on being **off campus for more than three months** in any academic year, you must fill in Form GS090 and obtain approval from the Head of School (the chain of events is that the Student, a GRC member and the Supervisor(s) sign the form, the Head of School approves, and submits to Vice Dean of Graduate Studies).

6. Your PhD thesis and viva

Refer to the documents listed in the Introduction for general advice. The specifics of a Postgraduate thesis and viva defended at the School are as follows.

- For a mostly theoretical work, you can override the advice given in the guide about dividing the thesis into sections named “Methods”, “Results”, etc.;
- For **an article-based thesis**, the School’s requirements are that¹
Article-based theses must include at least two publications, either published or accepted for publication. The student would normally be first author or co-first author on the publications. Peer-reviewed journals are the norm.
- For the viva, you are requested to give **an oral presentation of your results**. It should last at least 20 minutes + questions, but no more than 40 min.

An important point to note is that from the point of view of the University, **the completion date** of your PhD is the date at which you submit the **hardbound** copy of your thesis to be held the library. The hardbound copy is the final copy of your thesis, produced after the viva and including corrections (if any).

If that date is prior to the fourth anniversary of the beginning of the structured PhD (or third, for a non-structured PhD), then the PhD is considered to have been completed “in time”.

However, please note that an **IRC-funded scholar** must start their PhD on September 01, and that the IRC considers the PhD to be completed once the **softbound** copy of the thesis is submitted, i.e. prior to the viva. Please keep that in mind when deciding which is the best calendar possible to finish their PhD. Here are the IRC’s Terms & Conditions on this point:

"Where a scholar submits a soft bound copy of their thesis for examination before the specified end date of the funding term, they must inform the Council in writing and cease drawing any remaining funds from their scholarship account at the end of the calendar month in which the soft bound thesis was submitted."

Note also that a limited number of **write-up bursaries** are sometimes being offered to address the problems being encountered by PhD students who are near to completing their theses yet who find themselves, for whatever reason, without funding. Usually these bursaries can be applied to in April, see <http://www.nuigalway.ie/graduate-studies/currentstudents/write-up-bursary/>

¹ <https://www.nuigalway.ie/media/collegeofscience/pdfs/article-PhD-guidelines.docx>
September 2019.

School of Mathematics, Statistics and Applied Mathematics

PROVISION OF TEACHING DUTIES BY RESEARCH POSTGRADUATE STUDENTS

It is University policy that research postgraduate students are required to do **120 hours of unpaid teaching per year** (subject to certain exemptions detailed below). This is an essential component of the training of these students. The hours can include training, preparation, administration etc., and each School is required to draft its own procedures for implementation of this policy in a consistent and transparent manner.

The School applies the following guidelines to all its research postgraduate students.

1. Every full-time PhD student and every full-time research Masters student will be required to carry out the teaching detailed in Point 2 below.
2. Each student has to reach a total of 100 hours by performing any of the tasks listed (with appropriate weighing) in the Appendix below. A factor of 1.2 is then applied to this number to account for travel time, extra preparation, administration, processing, and other similar factors.
3. Once the quota has been reached the student can be paid for additional teaching and grading at the usual University rate.
4. The activity of each student will be recorded and monitored throughout the year in a transparent manner by the School Administrator and the Director of Graduate Studies. It will be reported and discussed at the annual GRC meeting.
5. **Exemptions:** Students who are not paid through a NUI Galway research account are exempt from the unpaid teaching requirement. Full-time PhD students in the last two semesters of their degree are exempt from the unpaid teaching requirement. Students who are co-supervised by someone in another school in NUI Galway can share their duties proportionally between the two schools.

Appendix: list of teaching duties (with their weight in hours).

- Tutorial (×2);
- SUMS (×2);
- Lab (×1);
- Grading 4 pieces of continuous assessment (×1);
- Grading 2 exam papers (×1);
- In-class test invigilating (×1);
- MCQ processing (×1);
- Maths Enrichment lecture (×2);
- Maths Enrichment invigilating (×1);
- TYFriday presentation (×1);
- School visit (×2);
- Open Day school stand (×1);
- Open Day Science Experience Workshop (×2);
- Science & Technology Festival (×2);
- Conference/workshop organization (×1 up to a max of 10 hrs);
- Occasional service to the School, subject to approval.

Example: A student giving 24 tutorials (48 hrs), grading 200 pieces of CA (50 hrs) and giving a Maths Enrichment lecture (2 hrs) will reach the 100 hrs quota.

Student Duties Record Sheet

Student name:

ID:

- Please refer to the School's Postgraduate Handbook document.
- If you were exempt of teaching duties this academic year, please explain why below:

- If you reached the required 100 hours quota please check this box:
- If you didn't meet the required 100 hours quota this academic year, please explain why below:

- Please give details of the two hours of Outreach activity you performed this year:

Date:

Name and signature of GRC Chair:

School of Mathematics, Statistics and Applied Mathematics, NUI Galway.

September 2019.