

Zoology Postgraduate Research Student Handbook

Discipline of Zoology, School of Natural
Sciences

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Introduction

There is increasing emphasis placed on research output as Ireland promotes the concept of a “knowledge-based economy”. An important part of our research output is through the production of research theses and, very importantly, the publications that arise from postgraduate and postdoctoral research work. An original thesis might include published or unpublished papers, including potentially jointly authored papers. Where chapters in a PhD thesis are in the form of jointly authored papers, the student must, at the beginning of each chapter give a detailed account of the precise nature of her or his contribution to that paper/chapter. Where papers are included as chapters, they must be modified to be formatted consistently, to avoid too much repetition, with a single reference section, and with the chapters bounded by general introduction and discussion chapters to bring the work together. The thesis should stand as a coherent body of work.

Postgraduate research is, therefore, and rightly, a key departmental activity, which needs to provide mutual benefit to the individual students and the department as a whole. Postgraduate research requires clearly formulated hypotheses and a sound scientific approach. Successful research and its professional dissemination enhance the standing of the Department and the students who pass through it. It is the aim of the Discipline of Zoology, within the School of Natural Sciences, to promote excellence in research. This document sets out the strategy to support postgraduate research students and their supervisors in achieving the full potential of research activities. We aim to foster responsibility among students and staff that is mutually supportive and enhances a professional attitude to research.

At the outset of each postgraduate research project, a Steering Committee is assembled to support the student in successful completion of the work. The committee consists of the Postgraduate Coordinator for the discipline (or Head of Discipline where the Coordinator is the supervisor or advisor of the project) and a member of academic staff not involved with the research directly but who acts as an independent advisor. The supervisor and, where applicable, co-supervisor(s), will also sit on the committee, except during the confirmation process where they may attend but do not participate in decision-making. The role of the committee is to monitor the development of the research student and, as a consequence, improve research output, and to give constructive guidance and feedback to the student. Periodic formal meetings between research students and their steering committees are arranged as detailed below. The committee should recognise the importance of: motivation of the student; basic skills; supervision; developmental structure of progress during the postgraduate period; and resources.

The Department and its students are entitled to have a common understanding of research expectations and responsibilities. This should be through a consultative process that enables and encourages staff and students to be fully engaged in, and supportive of, the professional requirement to produce well-trained and knowledgeable postgraduates. The work of the Steering Committee is designed to support that expectation.

The function of the Steering Committee

The Research Steering Committee is there to guide the direction of research and provide a forum for discussing the intellectual basis and progress of the work. A key function of the committee is to identify, and recommend solutions to, constraints to progress.

The Steering Committee will be convened (Table 1): 1) three months after commencement of the project, when the student presents a project proposal; 2) at the end of the first year with presentation of a progress report and 3) in the case of students entering on the PhD register, a confirmation meeting within 18 months where the committee decides if the student should progress on the PhD register or transfer to the MSc register to complete an MSc thesis before the end of the second year. The student, with advice from the supervisor, takes the initiative to arrange the dates for the meetings and ensures that documents are delivered to the committee on time (at least 10 working days in advance of the meeting).

Table 1. Timing of Steering Committee meetings

Nature of meeting	September registrants	January registrants	March registrants
Initial start-up (3 months)	December	April	June
Progress (12 months)	August/September	January	March
Confirmation (18 months)	March	June/ July	August/September

Following each meeting, the Steering Committee will consult and the research supervisor will produce, within three days, a brief summary of the progress of the research and recommend necessary follow up activities to be addressed by the student.

Reports required by the Steering Committee

The Steering Committee requires that:

- At least ten working days prior to a Steering Committee meeting, the student should submit the required documents by email, agreed and checked in advance with the supervisor.
- The project proposal (produced for the initial meeting) should outline clearly the scientific questions to be studied and the scientific objectives of the research. These should not be stated as nebulous or general goals, rather as clear and testable hypotheses. It should include a brief summary of the pertinent literature, methods to be used to do the research and a timetable for the research. These will be reconfirmed or reappraised at subsequent meetings.
- A self-assessment questionnaire that identifies the practical and intellectual development requirements for the timely completion and dissemination of the research should also be presented by the student at the initial meeting. Progress in development of the skills will be self-monitored by the student and, in consultation with the supervisor, include verifiable milestones. This could include the identification of and participation on suitable courses. You can download the self-assessment questionnaire at <http://www.tcd.ie/Zoology/postgraduate/>.
- Successive reports provide a means to review progress. Basic repetition is not required, but reference to previous reports is clearly relevant. Progress reports should be in summary form, or

more detailed but selective. Reports should include a table of progress of submitted and in-draft publications, and a concise summary of attendance at conferences and presentations made (title of paper or poster; with author list).

Reports should not exceed 10 pages, be in 1.5 line spacing and should contain a full reference list. All tables, figures and references need to be presented at a high quality in a recognised scientific reporting format.

The confirmation process

It is university policy that all post-graduate students who enter directly on the Ph.D. register must be confirmed by their Steering Committee to continue on that register on condition of satisfactory progress. This must take place within 18 months on the register. If the Steering Committee feels that the project is not on track to deliver a satisfactory PhD thesis within the normal time frame (4 years), the student is required to transfer to the MSc register to submit an MSc thesis within two years. A confirmation meeting may take place earlier than 18 months at the request of the supervisor, at the most appropriate time for the student's progress.

The confirmation process is of fundamental importance. It requires evidence that the student has a high probability of meeting the requirements of the higher degree. The process requires submission of a progress report, which summarises the research that has been completed and a clear and well-structured plan for the remainder of the project. In addition, a draft of a manuscript that will be submitted for publication to a peer-reviewed journal is also required. It is expected that these draft papers will include amendments that have been incorporated following review by the project supervisor.

Reports that are lacking important detail or are not produced to a high quality will be referred back for revision. Where transfer to the MSc register is recommended by the Steering Committee but disputed by the student, the student has the right of appeal to the Director of Postgraduate Teaching and Learning where the School's appeals process will be applied.

It is expected that from 2019, students will be required to submit confirmation reports using Turnitin Software through Blackboard. A module code for submission will be forwarded from the School of Natural Sciences (Frances League) to all Year 2 postgraduate students.

The role of supervisor and student

Both student and supervisor have responsibilities. The research supervisor and student should meet on a regular one-to-one basis. This should be agreed between the students and supervisor and should be at least once a quarter, although in most cases it will be more frequent than that.

Expected student responsibilities are:

- except in exceptional, and agreed, circumstances, research is carried out on a full-time basis;

- to become familiar with cutting-edge issues in their subject and to develop the skills necessary for research/experimental planning, self-organisation of laboratory and field work and the technical and analytical skills required for high quality research;
- to self-monitor progress of work and to deliver in a timely fashion any research outputs according to a timetable of targets agreed with the supervisor;
- delivery of reports to outside agencies if these are an agreed condition of funding;
- arranging, in consultation with the supervisor, the Steering Committee meetings or, as may be beneficial, interim meetings; and
- to engage in wider intellectual and learning activities of the Discipline and School, including attendance at seminar programmes.

Supervisor responsibilities are:

- to foster a supportive environment for research students;
- to make her/himself available for meetings, provide timely feedback to all submitted work;
- through liaison within or outside the Discipline, facilitate reasonable logistical and infrastructure support. No one is expected to conduct research that is not practicable within the constraints of the Discipline;
- to identify difficulties that may restrict or prevent progress of the research and, where appropriate, to bring these to the attention of the student, Discipline staff and, where necessary, School personnel;
- to help the student in his/her dealings with College officialdom; the supervisor should be aware of College regulations as they affect postgraduates.

Annual postgraduate conference

Each student will be required to present, to the Disciplines of Botany and Zoology and other invited interested parties, a 15 minute (only 5 minutes for first year postgraduates) conference-style talk on their research every year during their registration. These talks will take place within a 1-2 day graduate student Research Symposium to be organised and run by the graduate students. This usually occurs in February-March. Assessment of talks will be provided by outside invited researchers in addition to academic staff, and detailed feedback to enable development and improvement of presentation-skills will be given to each student.

Demonstrating and Teaching

Assistance with teaching by post-graduate students is an important part of their experience and training. Demonstrating is a professional commitment and should be treated as such. It is, however, very important that time involved in demonstrating does not restrict progress of the research. Students and supervisors should agree the time commitment to demonstrating and keep a record of that agreement. A limit of 6 hours per week is set by Graduate Studies, but this may be restricted to less than that depending on the demands that this may have on the research programme.

The Zoology Building

Supervisors ensure that new postgraduates are introduced to the Discipline, informed of facilities, technical support and safety documentation. A primary document ('Introduction to Zoology Presentation') is available at: <https://www.tcd.ie/Zoology/local/>. A risk assessment must be completed before commencing project work.

Data and equipment ownership

The data produced by postgraduate research projects are not owned by students, or even their supervisors. They are owned by the University and, ultimately, in most cases, by Irish and European taxpayers. In line with Irish data protection legislation (http://www.lawreform.ie/_fileupload/RevisedActs/WithAnnotations/EN_ACT_1988_0025.PDF), with reference to data protection and data storage, all research Postgraduate students must submit all of the data they have produced to their supervisors by the end of their research projects. Supervisors may also request submission of field or laboratory notebooks, or other forms of research outputs, for auditing purposes. All equipment or consumable items purchased using research funds must also be returned. Delivery of these items must take place within four weeks of thesis submission and prior to *viva voce* examination (if applicable). The Department will not sign-off on awarding of degrees until these items have been submitted. Datasets must be structured in clear, easy-to-follow format, with metadata supplied if necessary. Please see College's policy on data storage and ownership for more information in Section 6 in the College Good Research Practice policy document (<https://www.tcd.ie/about/policies/assets/pdf/TCDGoodResearchPractice.pdf>).

Procurement information for new postgraduates and staff

If you wish to purchase goods and /or claim expenses through your grant, please note that all requests for goods and services are raised through the University's iProcurement Financial Information System (FIS) using the platform 'Oracle'. To familiarise yourself with the system you will need to complete some basic training modules. Zoology provides online information specific to the discipline on how to place orders – see 'The FIS System - placing orders in Zoology' at <https://www.tcd.ie/Zoology/local/>.

Online training and user manuals for all modules of the Financial Information System are available at https://www.tcd.ie/local/fis/training/training_index.php. This will show you how to generate a requisition for goods and services (travel, laboratory consumables, *etc.*). Completed requisitions should be forwarded to your designated Preparer in Zoology (Alison Boyce or Sinead Kelly). Your Preparer will then send the requisition to the designated Approver (Dr. Martyn Linnie) and goods/services will be ordered electronically on your behalf.

For claiming expenses from your grant (*e.g.* expenses incurred while travelling to a conference or meeting, field work, *etc.*), you will need to be registered with Oracle. See <https://www.tcd.ie/financial-services/fis/> to access the required form.

Should you require assistance/training with a specific aspect of the Financial Information System, you can complete the form at https://www.tcd.ie/local/fis/training/FIS_training_booking_form.php.

Teaching Awards for Postgraduate Students

The **Trinity Teaching Award for Postgraduate Students** aims to identify and recognize individual postgraduate students who make a substantial contribution to undergraduate student learning. Under the terms of the scheme, schools nominate PG students that they believe merit recognition for undergraduate teaching /demonstrating. These nominations are reviewed by a panel and a selection of nominated students are shortlisted for an award and, following interviews with and presentations from the shortlisted candidates, a number of annual award winners are announced. Students can apply by nominating themselves when invited by the Director of Postgraduate Teaching and Learning for Natural Science (Prof. Mary Bourke). It is expected that this will be an annual selection process.

The **W.C. Campbell Postgraduate Teaching and Inspiration Award in Zoology** was established in 2017 by a gift from Professor William C. Campbell from his 2015 Nobel prize in Physiology or Medicine, which was awarded for discoveries concerning a novel therapy against infections caused by roundworm parasites. The gift is a token of gratitude for Prof. Campbell's undergraduate education in the Natural Sciences, and for the inspiring mentorship of Dr. James Desmond Smyth of the Zoology Department. It is awarded annually, on the recommendation of the Head of Zoology, to a postgraduate student in Zoology for excellence in teaching and mentoring undergraduate students. Applications will be invited by email (with supporting guidelines).