



Trinity College Dublin

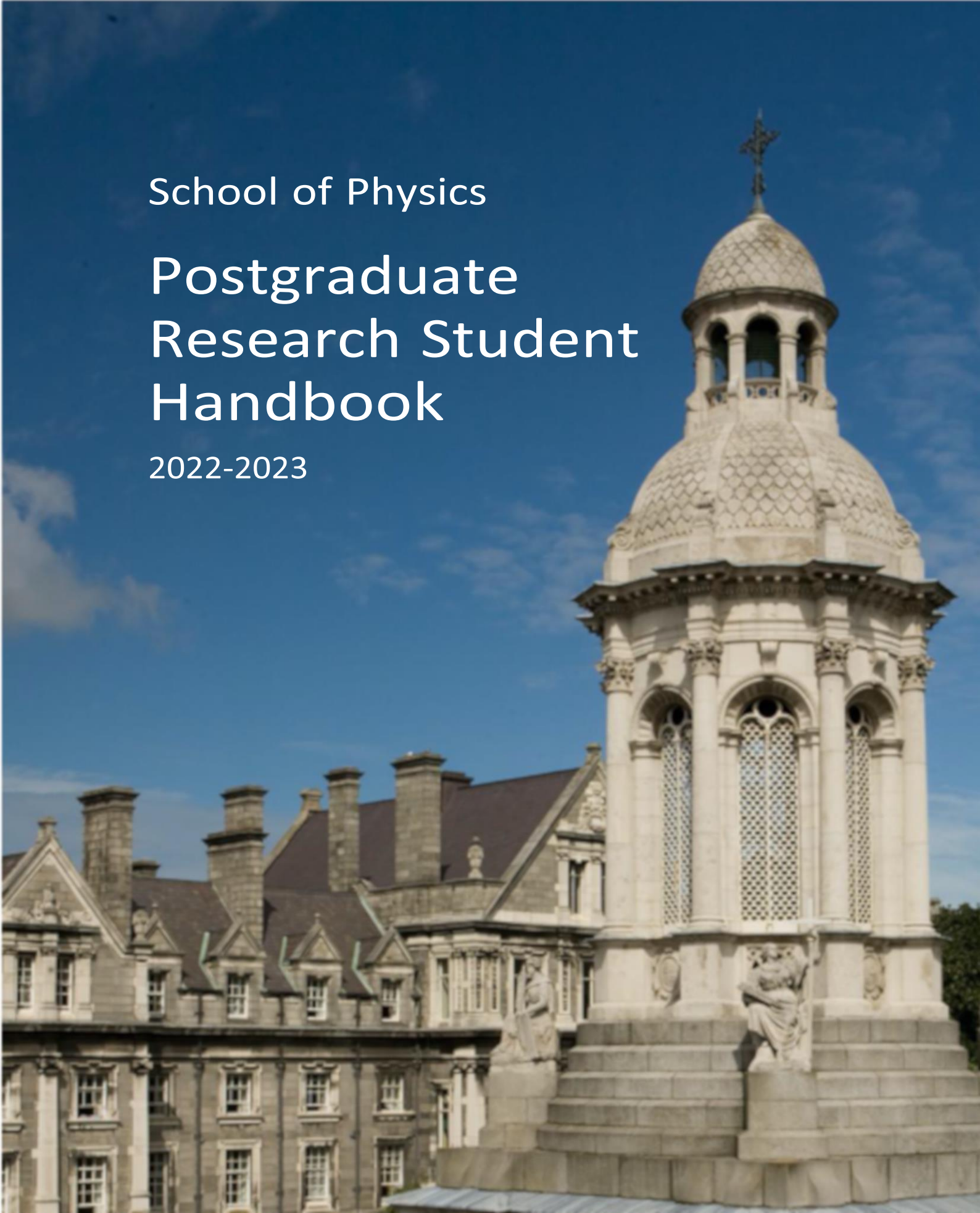
Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

School of Physics

Postgraduate Research Student Handbook

2022-2023



SCHOOL OF PHYSICS, TRINITY COLLEGE DUBLIN <https://www.tcd.ie/Physics/>

Disclaimer The information contained in this document is intended to provide a guide to those seeking admission to the programme and to current students. Trinity College Dublin (TCD) reserves the right to update or change syllabi, timetables, or other aspects of the programme at any time. Changes will be notified to current students by e-mail.

The full regulations concerning postgraduate students and the conduct of research degrees and their examination are contained in the University Calendar Part 3. The calendar is online (<http://www.tcd.ie/calendar/>). Where there is any conflict between the University Calendar and this handbook, the Calendar shall take precedence.

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1. Overview

The School of Physics (SoP) in Trinity provides both Master of Science (MSc) and Doctor of Philosophy (PhD) degrees, by research.¹ Completing an MSc or a PhD requires that the candidate make an *original* contribution to knowledge. This makes a research degree a highly individual experience. However, we also aim to provide a structured pathway leading to either an MSc or a PhD. Each research student registered in the SoP participates in taught postgraduate (PG) modules that are designed to enhance the candidate's breadth and depth of knowledge, both in their research area, and in related fields. In addition, other programmes (e.g. seminar series) are included to provide experience in scientific presentation and public speaking.

This document describes the structure of the MSc and PhD degree programmes (by research) in the School of Physics². It also covers the regulations that apply to all postgraduate research students registered in the School of Physics, including those who carry out their research in other institutes, such as the Centre for Research on Adaptive Nanostructures and Nanodevices (CRANN), The Dublin Institute for Advanced Studies (DIAS) or the Armagh Observatory.

¹ We also offer two taught MSc degrees, i.e. MSc in Quantum Science and Technology and MSc in Energy Science. For these taught MSc degrees, please refer to <https://www.tcd.ie/Physics/study/prospective/postgraduate/taught/>.

² Please note that SoP is currently digitising the Postgraduate Research (PGR) procedures. We will notify students by email when a new procedure is rolled out.

2. Contacts

2.1 School of Physics Contacts

Documents, forms and other ongoing announcements associated with graduate student activities are located on [the School of Physics Website](#) and [the PGR SharePoint Site](#).

The most important contact points are the Director of Teaching and Learning, Postgraduate (DTLPG) and the Postgraduate Administrators:

| Role | Name | Email | Tel |
|---------------------------|----------------------|--|------|
| DTLPG | Prof. Hongzhou Zhang | hozhang | 4655 |
| PG Administrator | Ms. Úna Dowling | dowlingu | 1675 |
| PG Seminars | Ms. Rashima Sharma | sharmar3 | 1675 |
| PG Student Representative | Ms. Lórien MacEnulty | lmacenu1 | |

Other useful School of Physics contacts are:

| Role | Name | Email | Tel |
|---|-------------------------|--|------|
| Head of School | Prof. Johnathan Coleman | headphys | 3859 |
| Director of Research | Prof. Stefano Sanvito | sanvitos | 3065 |
| School Manager | Dr. Colm Stephens | stephec | 2024 |
| Financial Administrator | Ms. Marie Kinsella | makinsel | 1696 |
| Chief Technical Officer | Mr. Ken Concannon | kconcann | 1308 |
| Safety Officer | Mr. Joe McCauley | pmcculey | N/A |
| Curriculum Development and Global Officer | Dr. Niamh McGoldrick | nmcgoldr | 3463 |

You can also email physicspostgraduate@tcd.ie and specify your queries in the subject (e.g. registration).

2.2 College Contacts

The College also provides a number of contact points useful to postgraduate students.

- Graduate Studies Office (GSO):

The GSO administers all Masters and Doctorate programmes in the College. It also provides detailed information for graduate students.

http://www.tcd.ie/Graduate_Studies/

- Graduate Students Union (GSU)
The GSU is an independent body which represents graduate students in Trinity.
<https://www.tcdgsu.ie/>
- Postgraduate Advisory Service (PAS)
The PAS offers a comprehensive range of academic, pastoral and professional support, dedicated to enhancing your student experience. E-mail: spgsupp@tcd.ie
<https://tcd.ie/seniortutor/students/postgraduate/>
- Career Advisory Service (CAS)
The CAS service offers a range of supports from the professional team of Careers Consultants, including job fairs, CV/interview preparation, individual career guidance appointments etc.
<https://www.tcd.ie/Careers/graduates/>
- Postgraduate Supports for Students with Disabilities
Postgraduate students (both taught and research) who have a disability are encouraged to apply to the Disability Service for reasonable accommodation.
Supports for Postgraduate Students includes:
 - Academic Support
 - Assistive Technology
 - Occupational Therapy
 - Support on Placements and Internships
 - Preparation for Viva Voce examinations

An application can be made through my.tcd.ie via the 'My Disability Service' tab. Additional information is available in a step-by-step How to apply for Reasonable Accommodations guide.

Any postgraduate student in Trinity (or prospective student) is welcome to contact the Disability Service to informally discuss their needs prior to making a formal application. Email: askds@tcd.ie
<https://www.tcd.ie/disability/contact/>
<https://www.tcd.ie/disability/current/Postgrad.php>
- SoP PG Student Representative:
The School has a PG student representative who can assist students in a number of issues and helps them liaise with the School as well as the GSU. The current representative is Lórien MacEnulty, E-mail: lmacenul@tcd.ie

3. College Regulations

Regulations for Higher Degrees by Research are contained in the [University Calendar Part 3](#). The University Calendar is available in all College libraries, the School Office and online <http://www.tcd.ie/calendar/>.

Please refer to the University Calendar for general regulations, governing higher degrees by research only, for information on topics such as:

- Admission requirements
- Probation
- Subject of research
- Role of Director of Teaching and Learning (Postgraduate)
- Progress and continuing registration
- Role of Supervisors
- Attendance
- Part-time registration
- Extension and off-books
- Transfer to/Confirmation on the PhD register
- Procedure for examination of a candidate
- Complaints concerning supervision
- Appeal against the decision of examiners
- Plagiarism

3.1 Application and Admission

Before being admitted as a research postgraduate student in the School of Physics, students must submit their admission application to the College. For general admission requirements, see <https://tcd.ie/courses/postgraduate/how-to-apply/>.

3.2 College Registration

Incoming graduate students officially start on the 1st of September or the 1st of March. Postgraduate registration is coordinated by the College's Academic Registry.

Please complete the registration process once you receive an invitation to register from the Academic Registry. See <https://tcd.ie/academicregistry/student-registration/>. Please refer to the SoP registration process outlined in section 4.1.

3.3 Registration Duration and Extension

The University Calendar provides that the minimum period of research before which a thesis can be submitted by a full-time student is one year (MSc) or two years (PhD) from the date of registration. Gull-time students, by default, submit their theses a maximum of two years (MSc) or four years (PhD) after first registering for a research degree (see table 3.1).

Table 3.1: Limits on Duration of Research Students (* 5 years where the student changes over from the full-time registrar)

| | Type | Min Period (Yr) | Max Period (Yr) |
|-----|-----------|-----------------|-----------------|
| MSc | Full time | 1 | 2 |
| | Part time | 2 | 3 |
| PhD | Full time | 2 | 4 |
| | Part time | 3 | 6* |

It can be noted that students are granted one month of Dean's Grace. Therefore, students who started their PhD on 1st September and would be due to submit by 31st August, have an end date of 30th September on their portal and student cards.

The default regulation is that extensions are not allowed. However, if a supervisor supports the call for an exception for a student, the DTLPG may then provide a strong recommendation to the Dean of Graduate Studies to allow an extension.

3.4 Plagiarism

The college has introduced regulations on plagiarism. Information is available in the college Calendar, PG Calendar Part III, General Regulations, Paragraphs 1.32 and following.

All students are required to complete the online tutorial '*Ready, Steady, Write*'. The link is : <https://libguides.tcd.ie/plagiarism/ready-steady-write>. In addition, students must include a signed cover sheet containing the following declaration with all their submitted work, including the transfer reports and theses.

I have read and I understand the plagiarism provisions in the General Regulations of the University Calendar for the current year, found at: <http://www.tcd.ie/calendar>.

I have also completed the Online Tutorial on avoiding plagiarism '*Ready, Steady, Write*', located at <http://tcd-ie.libguides.com/plagiarism/ready-steady-write>.

In order to support students in understanding what plagiarism is and how they can avoid it, college has created an online central repository to consolidate all information and resources on plagiarism. Up to now, information has been spread across many sites, which can lead to confusion. Through the provision of a central repository, it is hoped to communicate this information to students in a clearer and more coherent manner. The central repository is being hosted by [the Library](#) and is located at <http://tcd-ie.libguides.com/plagiarism>. It includes the following:

- (i). The Calendar entry on plagiarism for undergraduate and postgraduate students;
- (ii). The matrix explaining the different levels of plagiarism outlined in the Calendar entry and the sanctions applied;
- (iii). Information on what plagiarism is and how to avoid it;
- (iv). '*Ready, Steady, Write*', an online tutorial on plagiarism which must be completed by all students;
- (v). The text of a declaration which must be inserted into all cover sheets accompanying all assessed course work;
- (vi). Details of software packages that can detect plagiarism, e.g. Turnitin.

4. School Regulations

In the School of Physics, the DTLPG oversees the progress of postgraduate students from entry to the point of graduation. [Prof. Hongzhou Zhang](#) is the current DTLPG in the School of Physics. The DTLPG maintains oversight of the Structured PhD Programme and liaises with the Graduate Studies Office in matters relating to postgraduate education. The DTLPG is assisted by the Postgraduate Administrator, [Ms. Úna Dowling](#).

4.1 Registration with School of Physics

The processes outlined below applies to all the students. Before you start the process, you should consult with your supervisor regarding the management of payment.

4.1.1 Completing Registration: College Fees

Incoming or continuing postgraduates should receive an invitation to register from the Academic Registry for the impending academic year. Continuing student must have successfully passed either the Progress Report (Years 1 and 3) or the Continuation process (Year 2). The College fees have to be paid before the College registration can be completed. All SoP PGR students should follow the process below to complete the registration:

- (i). Follow the instructions in the invitation and register online via the web portal. see <https://www.tcd.ie/academicregistry/student-registration/>
- (ii). Download the '*Fee Statement Form*' from your TCD web portal, my.tcd.ie.
- (iii). The SoP Finance Manager, Ms. Marie Kinsella will email the guidelines with a spreadsheet. Please follow the instructions in the email to complete and submit the fee information.
- (iv). Upon your supervisor's approval, Ms. Marie Kinsella will make any payments from accounts that are held in the School of Physics. You will need to make any arrangements to pay the fees with external agencies where there is no research grant held in the School of Physics.
- (v). If there are any issues from Academic Registry with regards to the form or the coding, please forward it to [Ms. Marie Kinsella](#) as soon as possible.

4.1.2 Stipend Set-up and Renewal

In order to get set-up/continue on payroll for the student stipend, two forms need to be completed: (1). The *Graduate Proposal* form, and (2) The *Scholarship Exemption Declaration* form.

- (i). For new first year Postgraduate students *only*, please complete the [Pay/Bank Mandate](#) form.
 - For EU students (non-Irish) a Single Euro Payments Area (SEPA) bank account is acceptable.
 - For Non-EU students – if you don't have an Irish or European Bank account, please let [Ms. Eva Naessens](#)/[Ms. Marie Kinsella](#) know, as we are in contact with Human Resources (HR) on the procedure for how to proceed in these situations.
- (ii). Please complete the [Graduate Proposal](#) form as much as possible – this should be filled via the online SoP PGR Student Form.
 - Sections 2 & 3 need to be fully completed by the student and where they know any information for the other sections, they should complete as best they can.
 - The Supervisor or Principal Investigator (PI) signs off (e-signature if possible) at the Grant Holder part.
- (iii). The [Scholarship Exemption Declaration](#) form needs to be completed entirely by the student. This also includes signing off, by the student. This form can be submitted via the SoP PGR Student Form, either typed or hand written (due to COVID-19), e-signature is also acceptable.
- (iv). Forms are returned to [Ms. Eva Naessens](#) and cc'ing [Ms. Marie Kinsella](#) for checking. They will arrange for Head of School signature. Please send *one* email only, with all information included. The subject title should state '*Post-Grad Stipend Renewal (or set-up, which ever applies) – Student Name (Student Number)*'.

4.1.3 Safety

Students should observe any safety regulations issued by the Irish government, Trinity College Dublin and the School of Physics.

Students should register on the safety [database](#). Before registering there, students should read the School's safety statement. There is no need to give a physical sign off registration implies sign off.

4.2 MSc by Research

No specific stipulations beyond the requirements of the University Calendar (Part 3) apply. Students working towards a MSc by research should expect to spend two years carrying out research leading to the submission of a thesis, see section [4.4](#).

Students on the MSc register who wish to transfer to the PhD register, with the agreement of their supervisor, must satisfy the requirements of the structured PhD programme (see section [4.3](#)).

4.3 Structured PhD programme

A PhD student in the SoP is on a four-year (full-time) or six-year (part-time) structured programme in TCD. The student is required to carry out research under the direction of a supervisor with the support of a Thesis Committee. The students are required to complete approved modules to the value of 20 European Credit Transfer System (ECTS) credits before they can undergo a review process to continue on the PhD register.

4.3.1 The Thesis Committee

A Thesis Committee shall be appointed for all PhD students. This committee comprises the Principal Supervisor and any co-supervisors, the internal examiner and a non-supervisory member. The internal examiner and the non-supervisory member are appointed by the DTLPG. The role of the Thesis Committee is to monitor and advise in relation to the progress of the PhD student throughout the lifespan of his/her structured PhD, see section [4.3.7](#), section [4.3.8](#) and section [4.5.2](#).

4.3.2 Probation and PhD Register

As per the College regulations, most research students register directly onto the PhD register. This is on a probationary basis and students are required to undergo a formal review process after the first 18 months in order to continue on the register. This process is called a confirmation review.

A smaller number of students enter on the MSc register. Such students may undergo the review procedure mentioned above and if successful, may transfer to the PhD register. Under these circumstances, the review process is called a transfer review. However, the format and requirements are the same in both cases (i.e. the confirmation and transfer reviews).

4.3.3 Prerequisites for a Confirmation/Transfer Review

Students participating in the research PhD programme or seeking to transfer to the PhD register must fulfil a set of prerequisites before successfully passing the review process:

- (i). Achieve a pass grade of 50% in PG modules contributing to 20 ECTS credits (see section 4.3.4).
- (ii). Achieve an overall grade of at least 60% across a required number of PG module credits (see section 4.3.4).
- (iii). Fulfil the duty as the Undergraduate Laboratory Teaching Assistance (see 4.3.5) and achieve a pass grade in the module PY5025 on Teaching for Physics Postgraduate Teaching Assistants (see section 4.3.4).
- (iv). Complete the online module CA7000 entitled "*Research Integrity and Impact in an open Scholarship Era*" (see section 4.3.4).
- (v). Maintain a satisfactory level of attendance ($\geq 75\%$) on the Postgraduate Seminar Series (see section 4.3.6).
- (vi). Submit the Annual Progress Report for the first year and any additional full year prior to the review (see section 4.3.7).

4.3.4 Postgraduate Modules

To pass the review process (confirmation or transfer), each student must achieve 20 ECTS credits. Of the 20 credits, 5 credits must come from the compulsory module on Teaching for Physics Postgraduate Learning Assistants (PY5025) and another 5 from the online module on Research Integrity (CA7000). To obtain these credits the student must pass the modules. To obtain the credits for any other module, the student must attain a grade of 50% in that module. Moreover, for the remaining 10 credits for scientific/technical modules, the overall grade across all modules must be at least 60%.

A list of approved modules will be circulated to the students who have not passed their transfer/confirmation review. The approved list will feature taught modules from a number of sources, for example:

- (i). The School of Physics offers a limited number of 5-credit PG modules, see <https://tcd.ie/Physics/study/current/postgraduate/modules/>. Note some modules are only offered on a biennial basis (i.e. each module is given only every second year). The School of Physics reserves the right to cancel modules. Please note that courses will be cancelled if there is insufficient uptake.
- (ii). Modules can be taken from other PG programmes and/or other Schools in TCD.

For example, a number of students take modules offered by

- the Quantum Science MSc Programme, see <https://www.tcd.ie/Physics/quantumtech/>
- the Energy Science MSc Programme, see <https://www.tcd.ie/courses/energyscience/about/modules/>
- the Dublin Chemistry Graduate Programme, see https://chemistry.tcd.ie/Study/current_students/postgraduate/dublin-chemistry/
- the Trinity Centre for High Performance Computing, see <https://maths.tcd.ie/postgraduate/masters/modules/>
- the Irish Geoscience Graduate Programme, see <http://www.iggp.ie>

(iii). Approved modules from other universities and organisations.

Students should follow the guidelines in the email and submit their module choices. The School office will enrol the student on TCD modules, while the student manage non-TCD modules themselves. If any issues (e.g. timetable clash) are spotted, students will be notified in advance by email and will need to arrange to take an alternative course.

If a student wishes to take a module that is not on the approved list. The student should follow the procedure below:

(i). The module can be any of the following:

- TCD undergraduate (UG) or PG modules.
- External modules from another organisation, including on-line modules.
- Students can propose a directed study module with their supervisor. This is a module of study and assessment that the student design personally with their supervisor. It could be based around studying part of a book.
- Also permitted for credit is attendance at a summer school with subsequent assessment. The supervisor can assess the module personally.

(ii). Discuss with the supervisor and get the supervisor's support.

(iii). Contact the course coordinator/director of the programme and/or the lecturer to ensure the module is available for TCD SoP students.

(iv). Follow the guidelines in the email and request the DTLPG's approval.

(v). Upon the DTLPG's approval, the School office will enrol the student on TCD modules, while students must manage non-TCD modules themselves. If any issues (e.g. timetable clash) are spotted, students will be notified in advance by email and will need to arrange to take an alternative course. It is emphasized that permission must be obtained in advance from the DTLPG for any modules that are not on the approved list, if the student wishes them to be considered for credit towards transfer/continuation on the PhD register. The module must

have a clear learning objective, means of assessment and be of an appropriate size for 5 ECTS credits. No module can be used to gain credits unless it can be shown that it has been rigorously examined by continuous assessment or examination, or a combination of both. A full syllabus, module description and details of assessment will have to be presented for the DTLPG's permission. A numerical mark must be returned to the PG administrator ([Ms Una Dowling](#)) by the module coordinator on the completion of the module.

Non-scientific courses do *not* count towards the transfer onto the PhD register or continuation on the PhD register in the School of Physics. However, students are encouraged to avail of these courses and they will appear on their transcript. These courses may be offered through:

- the library <https://www.tcd.ie/library/support/skills-training.php>
- Tangent <https://www.tcd.ie/tangent/education/postgraduate/>
- Academic Practice and eLearning (CAPSL) <https://www.tcd.ie/CAPSL/>.

The student is free to take more than 20 credits worth of modules if they wish and have the permission of their supervisor. The final grade will be calculated from the scientific modules totalling 10 credits with the highest grades.

The chosen modules must have been taken and the exams concluded before the confirmation/transfer review. In some exceptional circumstances, the report may be submitted before the exams are taken. The confirmation/transfer interview will not occur until after the final marks are received and student has achieved the required grade.

A student who has not achieved the required overall grade or has not obtained a pass grade in the Teaching for Physics Postgraduate Learning Assistants module, as set out in section 4.3.3 within 18 months of registration as research student, will *not* be eligible to participate in the normal round of confirmation/transfer reviews. Under these circumstances, the student will be deemed to have *failed* the confirmation/transfer review process.

The student may undergo a repeat review 24 months after first registration. However, this will be the student's last opportunity to be reviewed. If the student does not achieve the required overall grade or pass grade in the Teaching for Physics Postgraduate Learning Assistants module or fails the review (see section 4.3.8), the student will be invited to submit a MSc thesis. (See section section 4.6 for details of the appeals procedure.)

4.3.5 Undergraduate Teaching Assistant

All postgraduate students are required to undertake the duties of an Undergraduate Laboratory Teaching Assistant. Students are required to teach up to a maximum of 50 hours of Laboratory Teaching Assignments per academic year. This requirement includes only students in the 1st, 2nd and 3rd years. These activities will be assigned by the School and the students will be informed of their nature and of their respective timetables. Students should report any timetable clash between their teaching assignments and the graduate courses of their choice to the School Manager, [Dr. Colm Stephens](#), so that a different arrangement can be put in place. Undergraduate Laboratory Teaching Assistant duties are a component of the compulsory postgraduate module on Teaching for Physics Postgraduate Learning Assistants. Further details on module requirements are given in section [4.3.4](#).

4.3.6 The Postgraduate Seminar Series

The postgraduate seminar series showcases research done within the School of Physics and at CRANN. It is presented mainly by postgraduates for postgraduates (with the occasional external speaker), but all staff and researchers are welcome (and encouraged) to attend.

All postgraduate students within the School of Physics must give at least one presentation in the seminar series before the transfer to the PhD register, and must attend at least 75% of these seminars. An attendance record is maintained. All PhD students must deliver a seminar at the Postgraduate Seminar Series before they can submit the thesis.

4.3.7 Progress Report and Continuing Registration

The progress of graduate students will be reviewed each year, and Supervisors and/or Directors of Teaching and Learning (Postgraduate) may test students in whatever way is appropriate. In the first, third and subsequent years of a student's period on the PhD register (except in the year in which s/he intends to submit her/his thesis) students and their Supervisor should complete a progress report.

The Postgraduate Administrator, [Ms. Una Dowling](#) will email detailed guidelines to the students ³. To complete report, the student need to

- (i). Conduct a self-assessment and draft the student part of the report.
- (ii). Submit the draft to his/her supervisor and arrange a meeting with the supervisor to discuss the student's progress. The supervisor needs to complete and sign their part of the report and return the draft to the student.

³ A template of the report can be downloaded from [the Office of the Dean of Graduate Studies website](#) (see section [2.2](#)).

- (iii). Submit the draft to the non-supervisor members of her/his Thesis Committee and arrange a meeting with the non-supervisor member to discuss academic progress. The committee member will need indicate whether or not they recommend continuation on the register.
- (iv). The student will submit the form using the online SoP PGR Student Form.
- (v). The thesis committee will be asked to approve the report. In the event of disagreement between the Supervisor and the non-supervisor member of a student's Thesis Committee as to whether the student's registration should be continued, the matter should be discussed, in the first instance, by the whole Thesis Committee (i.e. the supervisor and co-supervisor, the non-supervisory member and the internal examiner), and if no resolution can be achieved, mediated by the DTLPG and then the Dean of Graduate Studies.

Students will *not* be invited to register for their next year until this process has been completed. The DTLPG is not responsible for any progress reports not submitted on time. Students and supervisors will have to deal with Academic Registry separately.

4.3.8 The Confirmation/Transfer Review

Purpose of the Review:

The purpose of the confirmation/transfer process is three-fold. Firstly, the candidate must show that s/he has carried out a significant amount of research to date and that s/he is able to defend the results obtained. Secondly, the candidate must show that s/he can write clearly, with due regard for scientific notation and convention. These two elements, the equivalent of an MSc Degree, are necessary but not sufficient for a PhD. The third element requires the candidate to demonstrate that the chosen topic warrants a further two years of research and has the clear potential to lead to a PhD. It is also implicit that the supervisor believes that the student is capable of carrying out that further research and that there is access to appropriate facilities.

Procedure of the Review:

Students must undergo a confirmation/transfer review 18 months after initial registration.

The review is organized as follows:

- (i). The candidate should prepare a written dissertation on his/her research, i.e. the transfer report (see section 4.3.8). Candidates must submit a draft of the report to the supervisor well in advance of submitting it to the School.
- (ii). Students must submit the report via the online SoP PGR Student Form.
Late submissions or amended versions will be accepted only upon a written request signed by the student's supervisor. In any case no amended versions will be accepted after the calendar of the review interviews is established.

- (iii). The candidate should prepare an oral presentation of his/her research (see section 4.3.8), which will be presented in an oral examination/interview (see section 4.3.8).

The exact deadlines related to the review process will be publicized well in advance.

Confirmation/Transfer Dissertation:

The dissertation will be read critically by a member of the academic staff appointed by the DTLPG, the internal examiner. The transfer dissertations must be prepared according to the following guidelines:

- (i). Language: the dissertation must be written in good scientific English.
- (ii). Length: the dissertation must not be longer than 30 pages (excluding front matters, references and appendices). This is a strict limit.
- (iii). Font and Spacing: the dissertation should be in New Times Roman 12pt with 1.5 line spacing or equivalent. Dissertations written in unreasonably small characters will be returned to the candidates without evaluation.
- (iv). Style: the dissertation must contain
 - Title
 - Plagiarism declaration
 - Abstract (max 1 page)
 - Keywords
 - List of Publications and Presentations
 - Introduction and overview of the literature (max 10 pages)
 - Methods and Results (max 15 pages)
 - Conclusion and forward plan (max 5 pages): A Gantt chart or equivalent must be included in this section.
 - References: Reference must be numbered in the order in which they appear in the main text and must have the following format: Authors, Title, Journal, Number, Page, Year, for example:

W. Kohn and P. Hohenberg, Inhomogeneous Electron Gas, Phys. Rev. 136, B864 (1964).

The Oral Presentation:

The student will give a short oral presentation (10 minutes of presentation) on his/her research to the panel of examiners (Internal examiner, DTLPG or nominee, supervisor and co-supervisor if applicable). The presentation should illustrate the progress of the candidate's research and the future outlook. Therefore, this must contain:

- (i). Presentation of the problem
- (ii). Work done to date
- (iii). Outlook for the future

Confirmation/Transfer Interview:

The student must attend an oral examination (30 mins) as scheduled. The panel of examiners will consist of the internal examiner, the DTLPG and the supervisor (in attendance) and/or, if applicable, the co-supervisor if s/he is officially nominated in the student record. The student will be examined both on basic physics and on the content of his/her dissertation. On the basis of the oral exam, the panel will decide on one of the following:

- (i). Proceed to PhD register (without corrections)
- (ii). Re-submit dissertation having made minor corrections (resubmit within one month of confirmation/transfer Interview)
- (iii). Repeat review procedure 6 months later
- (iv). Write up MSc or withdraw.

Failure to Pass the Review:

Where a student is not successful in their initial confirmation/transfer review, s/he may apply to repeat the process six months later. However, if the student is unsuccessful a second time, a third attempt will not be allowed. Under these circumstances, the student will be asked to write up a MSc or withdraw.

As per the University Calendar, a student may appeal the result of a confirmation/transfer interview. This appeal will be brought in the first instance, to an appropriate sub-committee of the School Executive. A further appeal may be directed to the Dean of Graduate Studies, following The University Calendar part 2, Section 1, Paragraph 1.24.5.

4.4 Submission of a Thesis

These are the School of Physics guidelines for submission of MSc and PhD theses, and they must be followed by every registered student in the School. These do not replace the standard proof-reading procedure, which should be standard practice by the student and his/her supervisor, but have been designed to ensure the standard and the quality of theses submitted for examination. The college provides detailed guidelines for the preparation of the thesis, see "Thesis Submission Guidelines" on

the webpage <https://www.tcd.ie/academicregistry/exams/research-degree/>. The procedure is the following:

- (i). The normal deadline for thesis submission is the last day of September for September registrants, and the last day of March for March registrants. This includes the Dean's grace. Students should refer to their official record (my.tcd.ie) for the exact end date.
- (ii). Students should express their intention to submit a thesis at least 1 month before the intended submission date by submitting the [Intention to Submission](#) form via the online SoP PGR Student Form.
- (iii). The thesis should be discussed extensively with the supervisor, who must read the entire work prior to submission, and express his/her recommendation to the student. This is a student's right. A student who has concerns that his/her thesis has not been adequately read by the supervisor or who has not received appropriate feedback should contact the DTLPG immediately. The submission of a thesis is ultimately, however, at the discretion of the student who may choose to submit a thesis against or without the advice of the supervisor. However, this final course should be discussed with the DTLPG.
- (iv). A complete draft of the thesis should be submitted to the DTLPG ten days before the intended submission date. This draft should be free of typographical errors and in a final form. The draft will be reviewed by the DTLPG and/or a nominated senior member of staff to check that the draft thesis conforms to common scientific practice and to College regulations and guidelines regarding its form (layout, line spacing, font, inclusion of declaration, acknowledgements, abstract, references etc.). The scientific content or worth of the thesis will not be checked and the review does not form part of the examination of the thesis. It is intended to aid the student in preparing a thesis compliant with School and College regulations. After checking the reviewer will express a recommendation to the student:
 - to submit the thesis to College,
 - to submit the thesis after necessary amendments (the student's responsibility) or
 - not to submit the thesis (i.e. defer for serious thesis improvements)

The recommendation will be put on record in the School Office but is not binding (the student may still choose to submit the thesis to the University for examination). However, students should note that refusal to follow this recommendation will be communicated to both internal and external examiners.

- (v). After submitting the intention to submission form, a link to a Share Point folder will be set up and sent to the student. The student may use this link and

upload the PDF thesis to the folder. The student should submit the thesis to the School of Physics via the online SoP PGR Student Form.

4.5 Examination of Thesis

4.5.1 Examination of an MSc Thesis

Normally a MSc thesis is examined without an oral or viva voce examination. However, an oral examination will be held if either examiner or the DTLPG requests one or the result proposed by the examiners is fail or resubmission after major revision. If an oral examination is held it will be organised and conducted on similar lines to a PhD viva as described below. However, there will be no public presentation by the student.

After the examiners have read the thesis they will agree on a proposed result which may be one of the following:

- (i). Pass the thesis.
- (ii). Pass subject to minor corrections (these are checked by the internal examiner).
- (iii). Thesis to be resubmitted after major revision (after resubmission both examiners will re-examine the thesis). Resubmission is only allowed once.
- (iv). Fail. The result is communicated to the Dean of Graduate Studies and DLTP.

4.5.2 Examination of a PhD Thesis

The DTLPG, in consultation with the supervisor, will nominate an Internal and External Examiner. The supervisor will provide a two-page CV of the external examiner. This must be submitted to the GSO along with a nomination form.

The DTLPG can then nominate a chair for the oral or viva voce examination. This Postgraduate Administrator will set a date for the oral examination in consultation with both internal and external examiners and the supervisor and chair. Particular care will be taken to ensure that the examiners have enough time to read the thesis. The examination of a PhD thesis is in three parts:

- (i). The examiners read the thesis and write a pre-viva report individually. The pre-viva reports must be submitted a week in advance of the viva voce.
- (ii). The student makes a public presentation (45 minutes) which the examiners (and usually other staff and students from the School) attend. In the presentation the student will present a summary of the research and the main results described in the thesis. There will be no questions asked by either the examiners or the audience at the public presentation.
- (iii). Following the presentation the examiners conduct a face-to-face oral or viva voce examination in private with student. The conduct of the viva examination (e.g. length of time, number of questions etc.) is a matter for the examiners but typically it takes about two and a half hours

After the oral examination the examiners will confer and agree a result which is communicated to the Dean of Graduate Studies and DTLPG in a joint post-viva report.

The result may be one of the following:

- (i). Pass the thesis.
- (ii). Pass subject to minor corrections (these are checked by the internal examiner, and the internal examiner should approve the thesis or request the student to make further correction within a reasonable time of receiving the revised thesis).
- (iii). Thesis to be resubmitted after major revision (after resubmission both examiners will re-examine the thesis and may call the student for a further oral examination). Resubmission is only allowed once.
- (iv). Pass the thesis for the award of a MSc degree (subject to minor corrections if necessary).
- (v). Fail

4.6 Appeals

Appeals of decisions by the DTLPG may be taken to the College Postgraduate Appeals Committee; this is composed of a subset of the College Postgraduate Teaching and Learning Committee that omits the DTLPG from the appellant's school.

Appeals of School-level decisions may be taken to the Dean of Graduate Studies. Appeals of the School Research Ethics committee may be taken to the College Ethics review body. At any level of appeal, the Appeal Committee may decline to hear the appeal. College regulations on appeals of postgraduate matters are outline in the University Calendar Part 3.