



GMIT

INSTITIÚID TEICNEOLAÍOCHTA NA GAILLIMHE-MAIGH EO
GALWAY-MAYO INSTITUTE OF TECHNOLOGY

Academic Code of Practice No.5 Research

Version 1.1

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This code may be revised from time to time by the Institute.

*Tá leagan Gaeilge d Chód Iompraíochta na Mac Léinn le fáil ar
láithreán gréasáin GMIT.*

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SECTION 1: INTRODUCTION

1.1 SCOPE

This Code of Practice specifies the Institute's policy and procedures for the admission, registration, transfer of registration and assessment of students who embark on programmes leading to the award of degrees by research and thesis or published work. It follows good practice for the organisation of quality assurance for research degrees in Ireland.¹

It outlines and specifies the roles and responsibilities of all stakeholders in the postgraduate research process viz. the student, supervisors, Research Advisory Panel, examiners, Schools, the Research Office, Vice President for Research & Innovation (VP R&I) and the Office of Academic Affairs and Registrar.

The Code is divided into three specific areas:

- The context to postgraduate research in the Institute.
- The roles and responsibilities of all the stakeholders in the provision of quality assurance processes for postgraduate research.
- The regulations relating to the conduct of Postgraduate Research Student registration and assessment.

1.2 RESEARCH AND INNOVATION STRATEGY

The Institute pursues research and innovation actions as part of its strategic plan in order to:

- (a) Engage in scholarship through the discovery and creation of knowledge, its application, its structuring and its dissemination.
- (b) Promote an academic and intellectual ethos within the Institute.
- (c) Inform and enhance the Institute's teaching programmes.
- (d) Educate research students in the research process.
- (e) Provide research opportunities for the Institute's graduates and for academic staff.
- (f) Promote links and partnerships with regional, national and international partners including: industry, business, commerce, government, professional bodies, educational and research institutions and the community in general.
- (g) Contribute to the technological, economic, social and cultural development of the region and the country.

¹ *Good Practice in the Organisation of PhD Programmes in Irish Higher Education*, IUQB, 2009, available at http://www.iuqb.ie/info/good_practice_guidesacb4.html?article=a5b735f2-8618-4af8-8713-9bee30a780f

The Institute's Strategic Plan² is implemented through the Research and Innovation Strategy plan, which is based on a number of key principles that have been informed by best practice in research.

The plan is divided into strategic areas that have been identified by the Institute as being the drivers of growth for research and innovation in the Institute. Under each strategic area, there is an overall objective, along with a number of strategies to achieve the objective and a set of deliverables.

Key Performance Indicators (KPIs) are used for measuring quantitative progress of the plan. Some KPIs for research are universal and well recognised. Others are important in that they are specific to the Institute's positioning and priorities at the outset of the plan.

1.3 RESEARCH AND THESIS AWARDS WITHIN THE NATIONAL FRAMEWORK OF QUALIFICATIONS

Quality and Qualifications Ireland is responsible for the maintenance and development of the National Framework of Qualifications (NFQ). QQI has published descriptors for each level of the framework as well as the award types associated with each level. In addition, QQI has published standards for award types at levels 6 to 9 for specific disciplines and a set of generic standards to cover those disciplines for which specific standards have yet to be determined.

In November 2014, QQI agreed, with the Institute of Technology sector, a Protocol for the Awarding of Research Master's Degrees at NFQ Level 9 under Delegated Authority (DA) from Quality and Qualifications Ireland (QQI). GMIT's policy and procedures for validating new research disciplines at NFQ level 9 are dealt with in a separate document.³

For each named award, the specific standard of knowledge, skill and competence that must be acquired by the candidate is determined by QQI before that award can be made.

The following named awards will be available at Level 9 in the National Framework of Qualifications (see Appendix 1):

- Master of Arts (M.A.)
- Master of Business (M.B.)
- Master of Engineering (M.Eng.)
- Master of Science (M.Sc.)

² *GMIT Strategic Plan, 2019-2023*, available at <https://www.gmit.ie/sites/default/files/public/communications/docs/gmit-strategic-plan-2019-2023-print-a4-v2-2.pdf>

³ See staff.gmit.ie/ Office of the Vice President for Academic Affairs & Registrar / Codes of Academic Policy.

The Master's awards (Research & Thesis) are made on the basis of knowledge, skill and competence gained through a validated supervised programme of education and training that results in the production of a thesis or published work.

The following named award will be available at Level 10 in the National Framework of Qualifications (see Appendix 1):

- Doctor of Philosophy (PhD)

The PhD award is made on the basis of knowledge, skill and competence gained through a validated supervised programme of research, education and training that results in the production of a thesis or published work.

QQI's Generic Awards Standards for Higher Education and Training (July 2014)⁴ apply for Doctoral awards (see Appendix 1). QQI's Generic Awards Standards also provide a national benchmark against which interdisciplinary achievement of learning outcomes can be measured at Level 9. However, the use of QQI's generic standards is confined to areas for which QQI has yet to publish an applicable non-generic award standard. QQI's published specific standards at Level 9 for several disciplines⁵ provide the national benchmark against which achievement of learning outcomes can be measured within particular disciplines.

⁴ <http://www.qqi.ie/Publications/GenericMajorAwards-QQIAwardsStandards.pdf>

⁵ <http://www.qqi.ie/Pages/Active-NFQ-Standards-for-HE.aspx>

SECTION 2: ROLES AND RESPONSIBILITIES IN RELATION TO RESEARCH

Research projects in the Institute are carried out with high standards of rigour and conform to the principles of good research practice (excellence, honesty, integrity, co-operation, training and skilling). The postgraduate students, supervisors and their research projects lie at the centre of the postgraduate research process. This section describes the specific roles and responsibilities of postgraduate research students and their supervisors, and others involved in the administration of postgraduate research necessary to assure high standards of research.

The implementation of this policy should assist in the creation and maintenance of a culture of research that fosters and supports the principles of good research practice.

2.1 ROLES AND RESPONSIBILITIES OF THE RESEARCH STUDENT

The success of the research student greatly depends on their commitment and dedication to their studies, but also on their willingness to engage with their supervisors. The student is expected to take full responsibility for their studies and shall be expected to:

- (a) familiarise themselves and comply with the QQI and Institute policies and regulations⁶ governing postgraduate awards by research;
- (b) agree in advance the programme of work, and the aims, objectives and timeframe for the proposed programme, including the nature and extent of the guidance expected, with the supervisors⁷;
- (c) co-operate with their research supervisors in carrying out, in advance, risk assessments on all procedures, materials and equipment used during the course of their work;
- (d) agree a schedule of meetings with the supervisors and arrangements for the evaluation of progress;
- (e) inform the supervisors, as early as possible, of any significant problems and difficulties encountered;
- (f) submit an annual Progress Report to the Research Office and participate in a discussion on performance with the Vice President for Research & Innovation and Head of Academic Unit;
- (g) submit a thesis or published work portfolio and provide notice of intention to submit for examination in line with procedures;
- (h) not make contact with the External Examiners concerning their thesis;

⁶ Accessible via the Institute's SmartSimple Information System.

⁷ A proforma defining this research and management agreement is available via SmartSimple.

- (i) participate in induction and other training assigned by the Institute or supervisors;
- (j) disseminate the results and outcomes of the research at conferences, seminars, workshops, exhibitions, performances and in print (as relevant to the specific discipline).

2.1.1 Teaching Duties for Research Students

Teaching (lecturing, tutoring and demonstrating duties, for example) is a desirable activity in scholarship and it also assists in the acquisition of generic and transferable skills. Accordingly, it is an important element in the formation of a research graduate. Normally, the following conditions apply:

- (a) Postgraduate research students may engage in teaching cognate to their discipline or research, following agreement with their supervisors;
- (b) Postgraduate research students shall teach a maximum number of hours per week per year as agreed by their supervisors;
- (c) The Head of Department shall make arrangements for the mentoring of the student's teaching.

2.1.2 Research Student and Supervisor Disputes

In the event that either the research student or the supervisor(s) are dissatisfied with the way the research is progressing, each person has the right to discuss the situation with the student's Research Advisory Panel (see 2.2). If the matter is not resolved by the panel to the satisfaction of either student or supervisor, the person should contact the Head of Academic Unit to air their grievances. Should such action become necessary, the Head of Academic Unit will seek to find a satisfactory solution. Where such action does not lead to the desired outcome, all parties involved may agree to a change of supervisor. Where the Head of Academic Unit is the supervisor, the contact should be with the Vice President for Academic Affairs & Registrar and Vice President for Research & Innovation, with consequent action the responsibility of both.

The procedures outlined in the COP 7 - Student Complaints Procedure: Appendix 10 of the *Code of Student Conduct* are also available to the research student.

2.2. ROLES AND RESPONSIBILITIES OF SUPERVISORS AND RESEARCH ADVISORY PANELS

The Institute must satisfy itself that it has provided for the supervision of each student by members of staff and others who have appropriate research experience and a continuing active participation in research, and who are qualified and recognised by peers in their subject area. The Institute must ensure that the proposed research area is within the range of the supervisor's methodological and theoretical expertise and that the student can be adequately supervised when the supervisor's other commitments are taken into account.

2.2.1 Supervisors

The Research Advisory Panel, which can operate within GMIT or across institutions, will consist of a minimum of a Principal Supervisor, at least one second supervisor and other member(s) (See 2.2.5 below). The nominated Principal Supervisor will take primary responsibility for management of the research student's training and research project, and for related administrative matters. One of the supervisors shall normally be a member of the academic staff.

Supervisors are responsible for providing guidance to the student on the student's research and will take full responsibility for the overall management of the student's research and training, and for relevant administrative matters, and will be directly responsible to the Head of Department.

2.2.2 Mentoring Supervisor

Mentoring Supervisor(s) shall be appointed in instances where the proposed Principal Supervisor does not yet have experience of supervising students to completion at the proposed award level. A Mentoring Supervisor may be an experienced research supervisor from another discipline. Mentoring Supervisors shall ensure that the project supervisors have at all times guidance on the Institute's policies and procedures, the conduct and management of the research project and the supervision of the research student.

2.2.3 Supervisor Responsibilities

The success of a postgraduate research project may often be critically dependent on the commitment and expertise of the supervisors. The specific responsibilities of the supervisors include:

- (a) Providing guidance to the student on standards expected;
- (b) Planning and facilitating the training of the student in the use of equipment involved on the research project and in laboratory safety requirements;
- (c) Monitoring the progress of the student's work on, a formal basis, by setting appropriate academic standards and milestones to be attained by the student, and by assessing and providing constructive criticism within a reasonable period of time;
- (d) Advising the student on the schedule and procedure for transfer from the Master's to PhD registers and assisting the student with the process;
- (e) Encouraging the student to use project planning techniques in planning, controlling and monitoring the progress of the research project;
- (f) Advising the student on their performance and whether standards have been met;
- (g) Advising on the appropriate codes of practice (e.g. *COP 5 - Research*, *COP 7 - Code of Student Conduct*) and academic policies (e.g. policies on Research Ethics, Integrity and Plagiarism, and other policies concerning research (e.g. Intellectual Property Policy and Procedures), and teaching and assessment (if applicable);

- (h) Providing feedback on written and oral presentations arising from the student's research;
- (i) Maintaining regular contact between the student and supervisors through frequent meetings and communications and ensuring that all important decisions are agreed and recorded;
- (j) Directing the student to the regulations of the format and layout of the thesis and subsequent examination.

In cases where the research project is not proceeding as planned, the supervisors should identify and advise the student, at as early a stage as possible, of insufficient progress, in order to allow adequate time for re-orientation and correction.

The supervisors shall provide a written report⁸ on the research student's progress and the performance at dates entered in the Research Calendar. These formal reports on the research student's progress will be additional to the student's own progress report and should be informed by the student's report. The reports, submitted to the Institute and circulated to the Research Advisory Panel and associated student, will contain the following information:

- (a) extent of engagement with student;
- (b) training in research skills and techniques required by the student;
- (c) work completed by the student to date;
- (d) indication of satisfaction with the general progress of the work to date;
- (e) any serious problems encountered with the research to date;
- (f) an indicative date for submission of the thesis.

Where a *viva voce* (oral) examination is required, the supervisors, in consultation with the examiners, Chairperson, School Office and the Office of Academic Affairs, will put in place arrangements for the examination and attend at the examination.

2.2.4 Supervisor Training

The Vice President for Research & Innovation is responsible for ensuring that postgraduate research student supervisors are provided, where necessary, with appropriate training in order to ensure that they are:

- (a) in a position to advise on how to make effective use of the learning and research resources, available both within the Institute and elsewhere;
- (b) conversant with both the Institute's and QQI's regulations governing the award of higher degrees;

⁸ The formal report template is available via SmartSimple. Submission is via SmartSimple.

- (c) aware of the support available to postgraduate students through the Institute's student welfare and counselling services;
- (d) aware of individual responsibilities and duties under health and safety legislation.

2.2.5 Research Advisory Panel

Each student shall be assigned a Research Advisory Panel (RAP) consisting of at least three research-active members. Supervisors will be members of the Research Advisory Panel.

When appointed, the Mentoring Supervisor(s) will also be members of the Research Advisory Panel.

Research Advisory Panels shall be appointed on consideration of their:

- Supervisory experience;
- Knowledge of the research topic(s);
- Capacity to maintain contact between the academic and industrial or professional environments;
- Capacity to maintain communications between research teams.

Panel members, outside the discipline and Institute, may also be members in consideration of a balance of supervisory and discipline expertise and experience being available across the panel.

Normally, Research Advisory Panel members should be qualified to at least the level of the award sought by a candidate and should have:

- (a) prior experience as a postgraduate supervisor at the level of the award being sought and have brought at least one student to completion;
- (b) appropriate expertise, and be currently active, in the area of research proposed;
- (c) a postgraduate degree at the same level as the candidate's award registration, and not also be currently registered for a postgraduate research award in a cognate area.

The supervisors shall have availed of an adequate amount of training on student supervision and project management as provided by the Institute. Such training is obligatory for first-time Research Advisory Panel members fulfilling academic roles.

The proposed membership of the Research Advisory Panel shall be reviewed, by the Academic Council Research Sub-Committee, at the time of registration and at the time of transfer in instances where a candidate transfers from the Master's to the Doctoral Register.

2.2.6 Research Advisory Panel Responsibilities

The specific responsibilities of the Research Advisory Panel include:

- (a) support of the student in the development or refinement of a research project and/or plan of work;
- (b) providing advice and guidance about the direction of the research project and the strategies that might be used to achieve the research goals;
- (c) advising the student on the appropriate literature and other information sources;
- (d) agreeing the student's proposed specific and generic training needs, and attendance at appropriate training in research methodology and requisite techniques to ensure the student has the necessary skills for sustained independent effort;
- (e) advising the student on attendance at appropriate research seminars and/or conferences to provide opportunities to meet other researchers in the student's field of research;
- (f) providing encouragement, advice and assistance with the preparation and presentation of conference papers and the publication of papers arising from the research project and ensuring that the student gets appropriate recognition for their contributions;
- (g) ensuring that adequate supervision is in place for the student during any extended periods of absence by the supervisors or when the student is off-campus for field work or research training;
- (h) ensuring that, where projects are jointly supervised, there is effective communication and/or co-operation between the supervisors and the student;
- (i) using formal procedures to identify and address any breakdown of communication between the student and the supervisors;
- (j) advising the student on their readiness to transfer to the Doctoral Register;
- (k) in making a recommendation for transfer of registration from the Master's to Doctoral Registers or direct admission to the Doctoral Register, the Research Advisory Panel shall have an independent expert assessor(s) review the application. The recommendation shall also include a consideration of the financial, logistical, academic and partnership (if any) arrangements associated with the student's research project.
- (l) advising the student on their readiness to submit their thesis and work for assessment;
- (m) nominating suitable Independent Expert Assessors and Examiners for assessment of the candidate to the Academic Council Research Sub-Committee.

It is expected that the Research Advisory Panel formally meets the student at least twice a year. The Research Advisory Panel will formally minute its decisions, requests and recommendations, and circulate these minutes to all panel members and the associated student. Research Advisory Panels may utilise the Institute's pro-forma⁹ to expedite this record keeping activity.

2.2.7 Replacement of Research Advisory Panel Members

The replacement or substitution of a member of the Research Advisory Panel on any grounds shall be made by application¹⁰ to the Academic Council Research Sub-Committee for approval.

2.3 ROLES AND RESPONSIBILITIES OF THE EXAMINERS

Two examiners, including at least one External Examiner who is a recognised research-active expert in the field, will be engaged to assess each candidate. Examiners must be experienced in research in the general area of the student's submission and, where practicable, have experience as a specialist in the topic(s) to be examined and normally have qualifications at least as high as the level of award sought. At least one of the examiners shall have experience of examining research degree students at the level of the proposed examination.

Each examiner should have a clear understanding of the assessment task and the expected standard for the level of award sought. Whilst both examiners must be independent of the research programme (candidate and Research Advisory Panel) in question, they may have previously been engaged as an Independent Expert Assessor of the registration application, and/or of proposals to transfer between the Master's and PhD registers. External Examiners shall not normally be either a supervisor of another student of the Institute.

The supervisors of the candidate shall not act as examiners of the candidate. Both examiners shall be external, in cases where Institute staff present for assessment or where the candidate is not independent of GMIT staff.

The examiners are responsible for examining the evidence that the candidate has attained the standard of performance relating to the appropriate level of learning (see 1.3.1 or 1.3.2, Appendix 1). Evidence is found in the completed thesis or the published work (see 3.3.2), the *viva* examination of the student (if required), and the artefacts or performance of the student.

The Examiner shall:

- (a) examine the candidate's work;
- (b) attend the *viva* examination (if applicable);
- (c) consult with the other examiner;
- (d) complete and sign a report on the examination of the candidate (see 3.6.2).

⁹ Available via SmartSimple.

¹⁰ Form available via SmartSimple.

In all cases, the Examiner's report on the assessment of the candidate must include a recommendation based on the:

- (a) Quality of the research;
- (b) Contribution the thesis or published work makes to knowledge and scholarship;
- (c) Written style and overall presentation of the thesis or published work;
- (d) Performance of the candidate in the viva examination (if applicable);
- (e) Nature of minor amendments/corrections (if required).

Pre-Assessment Responsibilities:

1. The supervisor should forward the "Notice of Intention to Present for Examination" to the relevant School Office. The School Office will forward the "Notice of Intention to Present" to Admissions for processing. The Research Office should be copied on this correspondence.
2. The supervisor should forward examiner nominees, including CVs, to the Vice President for Academic Affairs & Registrar's Office for approval and appointment. The Vice President for Academic Affairs & Registrar's Office, upon approval, will forward the examiner details to the Admissions Office to process the appointment of examiners.
3. The Principal Supervisor will liaise with the Vice President for Academic Affairs & Registrar's Office regarding the nomination of an Independent Chair for the *viva voce* examination.
4. The Principal Supervisor of the proposed candidate will co-ordinate with the examiners, the Independent Chair, the co-supervisors and the candidate, regarding a suitable date for the *viva voce* examination. The Principal Supervisor, in liaison with the Vice President for Academic Affairs & Registrar's office, will organise the logistics for the *viva voce* examination including: booking a suitable room, refreshments for examiners, car parking and accommodation requests for external examiners.

2.3.1 Role and Responsibilities of Independent Chairs of *viva voce* examinations:

1. The Chair's primary role is to ensure that the *viva voce* examination process is undertaken in a rigorous, fair, reliable and professional manner in accordance with GMIT's Code of Practice No. 5.
2. The Chair must receive the examiners' preliminary independent reports no less than 24 hours prior to the examination. The examiners may also submit a joint report to the Chair at this time.
3. The Chair should confer with the examiners before the examination about their intended line of questioning. During the examination the Chair must ensure that questioning by the examiners is conducted fairly and professionally.

4. The Chair should be provided with a copy of the thesis under examination so that they may better follow the examination. The Chair is not expected to read the thesis in preparation for the examination. The Chair is not an examiner and must not question the candidate about the work under examination.
5. The Chair must ensure that any presentation made by the candidate at the commencement of the examination is completed in sufficient time to allow for adequate subsequent questioning by the examiners.
6. The Chair will ensure that the candidate is given adequate opportunity to defend the thesis and to respond to all questions posed by the examiners.
7. The Chair should ensure the timely progress of the examination. While there is no specified length for a *viva voce* examination, where it is expected that the examination will continue for more than two and a half hours, the Chair should offer the candidate and examiners a short break. The minimum expected time is one hour.
8. The Chair must confer with the examiners about the content and format required in their reports and recommendation. These reports and joint recommendation of the examiners must together provide sufficiently detailed comments on the scope and quality of the work to enable the Progression and Awards Board (PAB) to verify proper conduct of the examination and to substantiate the examiners' recommendation.
9. The Chair should ensure that the examiners' report(s) and recommendation are completed within a timely manner following the examination and that these report(s) and their recommendations are submitted in a timely manner to the relevant School Administration Office.

Post Assessment Processes:

1. The candidate will be afforded time to make corrections specified in the examiners' reports. {The timeframe allowed must be specified, recognising it will depend on the nature and volume of recommended changes.}
2. The School Office will forward the examiner's joint report and recommendation to the Vice President for Academic Affairs & Registrar's Office.

2.4 ROLES AND RESPONSIBILITIES OF THE ACADEMIC COUNCIL RESEARCH SUB-COMMITTEE

The role of the Research Sub-Committee is to advise Academic Council on quality assurance aspects regarding the Institute's research strategy, policies and activities, including on quality assurance relating to postgraduate research programmes and research degree registrations. The authority of the Research Sub-Committee is derived from the Academic Council.

The Research Sub-Committee will:

- a) Advise the Academic Council on the Institute's research strategy and policy;
- b) Review and promote research activity across the Institute;
- c) Foster collaboration and networking in research within the Institute and with external partners;
- d) Foster and enhance a research ethos within the Institute;
- e) Evaluate, recommend and promote educational programmes and the academic standards required to support research activity in the Institute.

Specific responsibilities relating to postgraduate research quality assurance are to:

- a) Review and revise postgraduate research degree regulations;
- b) Evaluate, recommend and promote education and training programmes for postgraduate research students and for postgraduate research supervisors;
- c) Advise the Academic Council on the annual research calendar and on postgraduate fees.

Specific responsibilities relating to research degree registration are to:

- a) Empanel selection boards to evaluate non-standard entry candidates for admission to the postgraduate research degree registers;
- b) Evaluate candidate applications for postgraduate research degree registration and recommend their acceptance, amendment, or refusal;
- c) Advise Academic Council on the membership of proposed Research Advisory Panels;
- d) Recommend the transfer of registration between the Master's and Doctoral post-graduate research degree Registers;
- e) Recommend examiner nominations for research degree assessment.

2.4.1 Academic Council Research Sub-Committee Membership

The lifetime of the Research Sub-Committee is aligned with that of the Academic Council. The membership is composed as follows:

- Chairperson - nominated by the Academic Council from among its members.
- Two nominees of the Academic Council from among its members.
- Vice-President for Research & Innovation.
- The Vice President for Academic Affairs & Registrar or a nominee of the Vice President for Academic Affairs & Registrar.
- Academic Administration & Student Affairs Manager.

- Senior Administrator – Research Office.
- Two current, registered postgraduate research students, nominated by the Students' Union.
- A nominee of each Academic Unit who is research-active.
- Co-opted members.

The co-opted membership, and the criteria and process for their selection, will be decided by the designated members at their first meeting and may include members external to the Institute.

2.5 ROLE AND RESPONSIBILITIES OF THE RESEARCH OFFICE

The Research Office reports to the Vice President for Research & Innovation, who is responsible for the strategy and management of research in the Institute in collaboration with the Heads of Academic Units. The Vice President for Research & Innovation is specifically responsible for the following in relation to the postgraduate research degree process:

- (a) The development, monitoring and review of the Research and Innovation Strategy, in consultation with the Schools, the Academic Council Research Sub-Committee and the Technology Transfer Office.
- (b) The management of the research and innovation budget.
- (c) Advising the Vice President for Academic Affairs & Registrar in the preparation of the annual Research Calendar.

The roles and responsibilities of the Research Office, relating to postgraduate research, are to:

- (a) Co-ordinate the preparation of research registration and transfer proposals for the Academic Council Research Sub-Committee.
- (b) Promote research and innovation actions throughout the Institute, to partners and prospective partners.
- (c) Organise and promote programmes of generic and cognate training for postgraduate students in collaboration with the Academic Council Research Sub-Committee, Institute staff, the Schools and/or with external institutions.
- (d) Advise the Staff Development function on the planning of programmes of training for new and existing supervisors covering procedures, regulations and practical management, including issues relating to research student supervision. If the Institute is unable to provide appropriate training internally, it shall make the resources available for staff to attend appropriate external programmes.
- (e) Facilitate the annual reporting of research students and supervisors as per procedures.

- (f) Organise annual meetings of the Head of Academic Unit with each postgraduate student, to collate the findings and to assist the resolution of unresolved problems as quickly as possible.
- (g) Manage and co-ordinate research activity across the Institute, in collaboration with the Heads of Academic Units, Research Centres and Groups.
- (h) Manage the implementation of quality assurance activities, as approved by the Academic Council, in collaboration with the Schools and the Office of Academic Affairs.
- (i) Develop and maintain key research measures of performance for management reporting.

2.6. ROLE AND RESPONSIBILITIES OF THE VICE PRESIDENT FOR ACADEMIC AFFAIRS & REGISTRAR AND THE OFFICE OF ACADEMIC AFFAIRS

The Office of Academic Affairs reports directly to the Vice President for Academic Affairs & Registrar, who is responsible for the quality assurance of all academic programmes including postgraduate research degrees, in the Institute. In relation to the postgraduate research degree process, the Vice President of Academic Affairs and Registrar has specific responsibilities to:

- (a) Update policies and procedures for postgraduate research degrees, as approved by the Academic Council Research Sub-Committee and have them adopted by Academic Council and Governing Body, as well as ensuring that they comply with current QQI regulations.
- (b) Seek approval or Delegated Authority for the delivery of proposed postgraduate research degree programmes from QQI (at Level 10).
- (c) Appoint Examiners to postgraduate degree programmes having delegated authority. The Office of Academic Affairs will seek recommendations for nominations of Examiners from the relevant postgraduate supervisors. Consultation with a nominee to determine their consent and availability to act as an Examiner shall be without commitment to their appointment as an Examiner.
- (d) Propose Examiners for appointment by QQI in the case of non-delegated disciplines/levels.
- (e) Seek prior approval from QQI to register postgraduate students in non-delegated disciplines.
- (f) Publish the annual Research Calendar in association with the Vice President for Research & Innovation.
- (g) Deal with complaints/appeals as per procedures.

The roles and responsibilities of the Office of Academic Affairs, relating to postgraduate research, are to:

- (a) Maintain the Institute's Master's Degree and Doctoral Degree Registers.
- (b) Admit and register postgraduate research students onto the Institute's postgraduate research Registers, and propose students for QQI registration, as approved by the Academic Council Research Sub-Committee.
- (c) Provide approved examiners of postgraduate research degree programmes with all necessary documentation and contracts.
- (d) Convene Progression and Award Boards and organise conferring of awards.
- (e) Lodge copies of all successful theses with the Library.
- (f) Advise the Vice President for Academic Affairs & Registrar and Vice President for Research & Innovation in the preparation of the annual Research Calendar.

2.7 ROLES AND RESPONSIBILITIES OF THE SCHOOL

The School is comprised of the academic, technical and administrative staff engaged in the development, delivery and administration of its academic programmes. The Heads of Academic Units are the senior academic officers of the Schools and are responsible for the strategic planning and operations in their Schools.

The Head of Academic Unit is specifically responsible for the following in relation to research projects and postgraduate research degrees in their Schools:

- (a) The nomination of research-active staff as members of the Academic Council Research Sub-Committee.
- (b) Acting as Secretary of the Examination Awards Board meeting.
- (c) Advise the Academic Council Research Sub-Committee and Research Office regarding the resourcing requirements for research activity in their School.

The roles and responsibilities of the School, relating to postgraduate research, are to:

- (a) Create and maintain a research ethos within the School.
- (b) Align research actions within the School with the Institute's Research and Innovation plan and with the academic programmes of the School.
- (c) Encourage and facilitate appropriate staff development to maintain or further develop the capacity of staff to undertake research and the supervision of postgraduate students.
- (d) Facilitate the assignment of teaching duties to the postgraduate research student in agreement with the supervisors.

- (e) Provide research office accommodation for full-time research students and plan for the provision of space, equipment (if required) and facilities for the conduct of research in the School in conjunction with Buildings & Estates.
- (f) Co-ordinate the convening of research student *viva* examinations (if required), duly advising the Vice President for Academic Affairs & Registrar of the scheduling.
- (g) Co-ordinate the meetings of Examination Awards Boards.
- (h) Submit the student's thesis and documentation to the appointed examiners and inform the Research Office of this activity.

SECTION 3: REGULATIONS AND PROCEDURES

3.1 INSTITUTE AND QQI REGISTRATION

All research degrees are designated as individual programmes and are treated accordingly. All postgraduate students in the Institute seeking national awards must register with the Institute and with QQI (if required).

There are two routes to the registration of a research degree programme:

- (a) GMIT is *accredited* in the field of learning to maintain its own register of students for specified research degrees in that field of learning (see Appendix 2).

GMIT has also *delegated authority* to make awards at level 9 in the discipline of Science and Mechanical Engineering and at Level 10 in the two disciplines of Aquatic Science and Mechanical Engineering. In respect of these, QQI automatically registers the relevant programmes once appropriate notification is received.

- (b) GMIT is *approved* by QQI in a field of learning and can submit individual research degree programmes for registration by QQI on a case for case basis (see Appendix 2).

Each research programme is submitted to QQI on a case-by-case basis. Any new research discipline has to receive the prior approval of QQI before a student can be registered.

The Institute can only conduct PhD programmes in the discipline areas of *delegated authority* or in discipline areas where *prior approval* from QQI has been granted.

The Vice President for Academic Affairs & Registrar will determine if the project/programme falls under delegated authority and may seek the advice of the relevant Head of Academic Unit, the Vice President for Research & Innovation and/or the supervisors.

The Academic Council maintains two Registers of candidates for higher degrees by research, as follows:

- (a) Register of Candidates for the Degree of Master (Research) - hereafter referred to as the *Master's Register (to include students initially registering on a Doctoral track)*;
- (b) Register of Candidates for the Degree of Doctor of Philosophy - hereafter referred to as the *Doctoral Register*.

Note: No postgraduate student can be registered in the Institute in a discipline or at a level which is not either *delegated* or *approved* by QQI.

3.2 ADMISSION TO MASTERS AND DOCTORAL PROGRAMMES BY RESEARCH AND THESIS

3.2.1 Normal Entry

The normal entry standard for a Master's degree is an honours Bachelor's degree (minimum level: Second Class Honours) which is a major award type at Level 8 on the NFQ, in a field of study directly related to the subject matter of the Master's degree.

The normal entry standard for direct admission to a PhD degree is a Master's degree by research from a recognised degree awarding body in a cognate area, or equivalent qualification. The Academic Council Research Sub-Committee may obtain an examiner's opinion on the applicant's Master's degree.

The Academic Council Research Sub-Committee shall recommend to the Academic Council the acceptance of an application for direct registration on the Doctoral Register.

If either English or Irish is not the applicant's first language, a certificate of language ability in either language is required. IELTS level 6.0 or equivalent is mandatory for those presenting with English as a foreign language.

3.2.2. Special Entry by Qualifying Assessment

Exceptional candidates possessing a pass primary degree, or other relevant qualifications not specified above, will be eligible for admission under the following conditions:

- (a) The Selection Board, as empanelled by the Academic Council Research Sub-Committee, recommends the candidate, conditional on passing an appropriate Qualifying Assessment as specified by the Selection Board.
- (b) The Selection Board shall be comprised of an internal and external examiner.
- (c) The candidate passes the specified Qualifying Assessment as conducted by the Vice President for Academic Affairs & Registrar. The Qualifying Assessment and its format must be approved by the Selection Board, the Vice President for Academic Affairs & Registrar and relevant Head of Academic Unit and shall be organised by the School. Where appropriate, in non-delegated areas, QQI should also approve the qualifying assessment. The Qualifying Assessment must:
 - Satisfy the learning outcomes of a Level 8 major award in a cognate field, or,
 - Equate to the final examination of a cognate honours Bachelor's degree programme.
- (d) The Qualifying Assessment material must be assessed by the Selection Board and be deemed to meet a minimum of second-class honours degree performance standard.
- (e) The School shall forward the result of the Qualifying Assessment to the Vice President for Academic Affairs & Registrar for review by the Academic Council Research Sub-Committee.

- (f) No candidate shall be registered who does not pass the qualifying assessment prior to entry.

3.2.3 Recognition of Prior Learning (RPL)

Candidates may gain entry to a programme or gain a full award by complying with the Institute's RPL policy and procedures as outlined in Code of Practice No. 6.

3.2.4 First Registration

Irrespective of the intended final award, postgraduate research students will usually register initially for a Master's degree (by Research & Thesis). It is important that doctoral track students are identified as such from the start, even though they are required to spend a period of time on the Masters Register. Suitably qualified students, may, with the approval of the Academic Council Research Sub-Committee, register directly for a PhD.

The Academic Council Research Sub-Committee shall recommend to the Academic Council the acceptance of a candidate application for postgraduate research degree registration.

3.2.5 Transfer to the PhD Register

The Institute must have *prior approval* or *delegated authority* from QCI to run PhD programmes in the discipline area before a student can be considered for registration in that discipline.

A student wishing to transfer from the Master's Register to the Doctoral Register shall make a formal application to the Research Office for review by the Academic Council Research Sub-Committee. The student is required to submit a detailed PhD transfer proposal using the specified transfer proposal template¹¹. The transfer process is a rigorous assessment of the quality of the work completed by the candidate, and of its potential for completion at Doctoral standard.

Normally, such an application should not be made earlier than 12 months after admission to the Master's Register, and not later than 18 months after commencement.

The proposal will be assessed by an independent expert assessor who is research-active in the field.

The transfer assessor will provide constructive criticism in assessing the potential of the candidate to successfully complete the project and will present these findings to the student and RAP in a written report¹². Independent expert assessors may also request a meeting involving themselves, the student, and Supervisory Panel to present and discuss their written report.

¹¹ The forms are available via SmartSimple.

¹² Template report available on SmartSimple.

In some cases, a transfer may arise from a submission of a Master's thesis, where the recommendation of the Examiners is to transfer the student's registration to the Doctoral Register, given that the work is of sufficient standard and scope to contribute to a PhD. In such transfers, the student shall not be awarded a Master's degree.

The Academic Council Research Sub-Committee shall recommend to the Academic Council the acceptance of a research student application for the transfer of registration from the Master's Register to the Doctoral Register.

3.2.6 Simultaneous Registration

Candidates shall not be eligible to register for the degree of PhD if, simultaneously, they are registered for another programme with QQI or another institution (except those registered on dual or joint awards) without prior permission from QQI. This applies to major awards and does not preclude candidates from the pursuit of ancillary qualifications.

3.3 REQUIREMENTS AND DURATION OF HIGHER DEGREE PROGRAMMES BY RESEARCH AND THESIS

Candidates for the degree of Master's and PhD will be expected to demonstrate the achievement of learning outcomes specific to their award discipline (ref to QQI descriptors).

The normal durations of studies for the Master's degree and the Doctoral degree are shown below:

Duration ¹	Master	Doctorate
Minimum	21 months ²	36 months ³
Maximum	48 months	72 months

¹ F/T Registration status only - P/T registration times are double those of the durations shown.

² Measured from the date of admission to the Master's Register.

³ Measured from the date of direct admission to the Doctoral Register, or from the date of admission to the Master's Register in the case of a transfer student

The Institute will continuously review the progress of learners and will closely monitor students. In exceptional circumstances, the Academic Council Research Sub-Committee and QQI may vary the permitted duration of the programme.

Registration will lapse automatically for a candidate who does not complete their research degree within the maximum period of admission to the relevant Register (or transfer to the Doctoral Register). If the candidate wishes subsequently to present for the degree, application for re-registration is mandatory.

Candidates on the Doctoral Register who are unable to complete the approved programme within the permitted duration for any reason, may, through the Academic Council Research Sub-Committee, apply to the Research Office for permission to transfer to the Master's Register. The Academic Council Research Sub-Committee may

permit such a transfer if it is satisfied that there are good reasons for doing so, and may attach special conditions, including provisions with regard to duration, to the candidate's registration for the Degree of Master.

The Academic Council Research Sub-Committee shall recommend to the Academic Council the transfer of a doctoral student to the Master's Register.

The candidate shall pay the approved fees on registration, and on the anniversaries of the student's research degree registration date.

3.3.4 The Award of a Higher Degree or Scholarship

Evidence of scholarship can be submitted for the Degree of Master and Doctorate. This is achieved by the candidate submitting a selection of publications and other evidence (the portfolio) as follows:

- Publication of scholarly work in renowned journals in the relevant field or in other appropriate ways, where the candidate is first author on publication or a satisfactory explanation as to why the work should be considered as the candidate's own work.
- Provision of demonstrable evidence that the publications under consideration are the candidate's own work.
- Provision of clear evidence of the candidate's contribution in cases where the publication is an amalgam of work.
- Provision of a context into which the publications can be set, so that the candidate can demonstrate that their work expands on a theme and shows broad understanding as set out by the learning outcomes for the relevant level.

The assessment of the candidate will take the same form as for a presentation of a thesis for the higher degree award. The candidate shall submit in the prescribed form and pay the approved fee.

The Academic Council Research Sub-Committee shall have the same oversight of the quality assurance procedures for the award of higher degrees through scholarship as by the presentation of a thesis. The Academic Council Research Sub-Committee shall advise the Vice President for Academic Affairs & Registrar on the registration arrangements.

3.3.5 Extension or Deferment/Suspension of Registration and Withdrawal

Candidates for the Degree of Master and PhD may apply to the Vice President for Academic Affairs & Registrar for:

- a) Extension of time, or
- b) Deferment of registration/suspension of registration.

Normally, the grounds for deferment or extension of time are medical or extenuating personal circumstances. The Vice President for Academic Affairs & Registrar shall determine if any extension of time or deferment is granted and shall seek the advice of

the Research Advisory Panel, the relevant Head of Academic Unit, and/or the Vice President for Research & Innovation.

The Institute shall maintain a record of any extensions of time or deferments of registration granted, which may in turn cause the candidate's registration to fall outside the stated maximum timeframe. In default, the candidate's registration will lapse and application for re-registration will be required. The candidate shall pay the approved fee on re-registration.

Alternatively, the candidate may apply to the Vice President for Academic Affairs & Registrar for a suspension of registration for a period not exceeding 12 months. In such circumstances, re-registration will not be necessary.

Where a candidate withdraws from a research programme, the Institute shall notify QQI and recommend their removal from the Register.

3.4 THE REGISTER OF HIGHER DEGREE PROGRAMMES BY RESEARCH AND THESIS

3.4.4 Maintenance of the Register

The Vice President for Academic Affairs & Registrar shall maintain a Register of Postgraduate Research Students (by Research & Thesis), with separate sections for the Degree of Master and the Degree of Doctor of Philosophy.

Upon admission, each research student shall be entered on the Register. The Register shall contain at least the following information as it becomes available as per the Research Calendar:

- a) Student's name
- b) Membership of Research Advisory Panel
- c) School/Centre
- d) Admission date
- e) QQI Postgraduate Register entry date
- f) Nominated Examiners and date of approval
- g) Planned graduation date or date for transfer to Doctoral Register
- h) Actual graduation date or date of transfer to Doctoral Register
- i) Recommendations of Examiners
- j) Date of Examination Awards Board meeting and result

3.4.5 Annual Notification to QQI

The Office of Academic Affairs is responsible for informing QQI annually, by a date determined by the Register and entered into the Research Calendar for each academic year, that candidates are actively engaged with their research programmes and maintaining adequate contact with their supervisors.

3.5 THE RESEARCH CALENDAR

The Vice President for Academic Affairs & Registrar, in consultation with the Academic Council Research Sub-Committee, shall publish a Research Calendar each year containing important dates relating to the planning for and progress of research students.

To achieve target conferring ceremonies the Research Calendar shall include the latest possible dates for completion of the following events:

- (a) Research registration proposals submitted to QQI.
- (b) Dates for submission of examiners' reports relating to examination of candidates.
- (c) Autumn and Summer Progression and Award Board sittings.
- (d) Dates of annual postgraduate research student training programmes.
- (e) Dates of supervisor training programmes.

An additional Progression and Awards Board may be arranged to accommodate candidates at times other than Summer and Autumn.

3.6 ASSESSMENT OF CANDIDATE'S WORK

Postgraduate research assessment must be conducted rigorously and fairly, using consistent procedures, and should only be undertaken by those individuals with relevant qualifications and experience (see 2.3), and with a clear understanding of the task. The assessment must have regard to the knowledge, skills and competence specified by QQI for Level 9 and 10 awards (Appendix 1).

3.6.4 Postgraduate Research Submission

The form, content and method of presentation of the candidate's work shall be appropriate in relation to the nature of the research work (e.g. in the case of certain disciplines it may take the form of an exhibition or a performance). Details regarding the format of presentation (thesis, performed and exhibited elements) are available from the School/Centre.

The Research Calendar will show deadlines for submission of theses and work, which allow ample time for examiner assessment of the work, viva examination (if applicable), the writing of the examiners' reports, the convening of a Progression and Awards Board, and the requisite administrative procedures.

3.6.5 Assessment

The examiners shall examine the submitted works and present an independent written draft report on these to the Chairperson of the examination panel, before any viva voce or alternative form of examination is held. In drafting their reports, the examiners must consider whether the submission satisfies the requirements of the award and where possible make an appropriate recommendation subject to the outcome of the viva voce examination (which is required for all PhD awards and may be requested by Examiners of Master degree awards).

A Chairperson, independent of the candidate and supervisory team, will be appointed for all final assessment sessions. The Chair, the examiners, the candidate and the supervisors shall be present at the *viva* examination. The supervisors attend the *viva* examination as observers only.

The Chair shall have knowledge of the Institute's policies and regulations in relation to postgraduate research and the standards expected at the level of the award. The role of the Chair is to clarify Institute regulations, where appropriate, and to ensure that the *viva* examination is conducted in a courteous and professional manner.

While there is no specified length for a *viva* examination, where it is expected that the *viva* examination will continue for more than 2.5 hours, the Chair should offer the candidate and Examiners a short break. The minimum expected time is one hour.

The candidate should be encouraged to give a short presentation before the *viva* examination.

The examiners shall, where they are in agreement, present their recommendation relating to the award in a joint recommendation, which will be forwarded by the Chair to the supervisors and student, and to the relevant School. The student will be afforded time to make any specified corrections. The reports and joint recommendation of the examiners must together provide sufficiently detailed comments on the scope and quality of the work to enable the Vice President for Academic Affairs & Registrar to satisfy themselves that the criteria for the award have been examined with sufficient integrity and scrutiny to substantiate the examination result.

Where the examiners are not in agreement, their recommendations shall be presented as separate reports, which will be forwarded to the Vice President for Academic Affairs & Registrar by the Chair. In the event where no agreed result has been determined by the examiners, the Vice President for Academic Affairs & Registrar will seek an examination of the candidate by a third examiner, nominated by the Academic Council Research Sub-Committee. The third examiner will assess the candidate's thesis and work and attend a *viva* examination of the candidate.

3.6.6 Progression & Awards Board (PAB)

For each candidate, the Progression & Awards Boards (PAB) shall consist of:

- (a) The Head of School (Secretary).
- (b) The Head of Department.
- (c) A Chairperson nominated by the Vice President for Academic Affairs & Registrar.
- (d) The President and Registrar may attend any such meeting in an advisory capacity in relation to this Code of Practice.

Members of the PAB shall individually and collectively have responsibility for the overall integrity of the process and are expected to act in a fair, objective, consistent and professional manner.

Following receipt of the reports from the Chairperson and the examiners, the Office of Academic Affairs will issue a broadsheet of results. The PAB Meeting should then take place. The proceedings of the meeting will be conducted in accordance with the provisions of the Institute's *COP 3 - Student Assessment Marks and Standards*. Having considered the recommendations of the examiners, the final determination of the result is a matter only for the PAB.

The decision of the PAB, whose recommendation as to the award or otherwise of a degree, shall be recorded (as per 3.6.7) and the recommendation, if necessary, forwarded to QQI by the Office of Academic Affairs.

3.6.7 Appeal of the Progression and Award Board Decision

A candidate may appeal the decision of the PAB (see *COP 3 - Student Assessment Marks and Standards*).

3.6.8 Degree of Master (Research and Thesis)

The Degree of Master (Research) is awarded without classification.

3.6.9 Degree of Doctor of Philosophy

The Degree of Doctor of Philosophy is awarded without classification.

3.6.10 Broadsheet Result Codes

Result	Code
Recommended	Rec
Recommended with minor amendments	Rec
Referred for substantial amendment and re-examination	NRec
Not recommended	NRec
Where Examiners' reports are not returned	NR

Note: The broadsheet should not be returned blank for any candidate.

SECTION 4: APPENDICES

4.1 APPENDIX 1: AWARD-TYPE DESCRIPTORS

QQI Generic Standard for LEVEL 9 (Master's Degree)

Title	Master's Degree
Purpose	This is a multi-purpose award-type. The knowledge, skill and competence acquired are relevant to personal development, participation in society and community, employment and access to additional education and training.
Level	9
Volume	Large.
Knowledge – breadth	A systematic understanding of knowledge at, or informed by, the forefront of a field of learning.
Knowledge – kind	A critical awareness of current problems and/or new insights, generally informed by the forefront of a field of learning.
Know-how and skill – range	Demonstrate a range of standard and specialised research or equivalent tools and techniques of enquiry.
Know-how and skill – selectivity	Select from complex and advanced skills across a field of learning; develop new skills to a high level, including novel and emerging techniques.
Competence – context	Act in a wide and often unpredictable variety of professional levels and ill-defined contexts.
Competence – role	Take significant responsibility for the work of individuals and groups; lead and initiate activity.
Competence – learning to learn	Learn to self-evaluate and take responsibility for continuing academic/professional development.
Competence – insight	Scrutinise and reflect on social norms and relationships and act to change them.
Progression and Transfer	Progression to programmes leading to Doctoral degree (Level 10), or to another Master's degree or to a Postgraduate Diploma (Level 9).
Articulation	Not specified.

QQI Generic Standard for LEVEL 10 (Doctoral Degree)

Title	Doctoral Degree
Purpose	This is a multi-purpose award-type. The knowledge, skill and competence acquired are relevant to personal development, participation in society and community, employment and access to additional educational and training.
Level	10
Volume	Large.
Knowledge – breadth	A systematic acquisition and understanding of a substantial body of knowledge which is at the forefront of a field of learning.
Knowledge – kind	The creation and interpretation of new knowledge, through original research, or other advanced scholarship, of a quality to satisfy review by peers.
Know-how and skill – range	Demonstrate a significant range of the principal skills, techniques, tools, practices and/or materials which are associated with a field of learning, develop new skills, techniques, tools, practices and/or materials.
Know-how and skill – selectivity	Respond to abstract problems that expand and redefine existing procedural knowledge.
Competence – context	Exercise personal responsibility and largely autonomous initiative in complex and unpredictable situations, in professional or equivalent contexts.
Competence – role	Communicate results of research and innovation to peers, engage in critical dialogue, lead and originate complex social processes.
Competence – learning to learn	Learn to critique the broader implications of applying knowledge to particular contexts.
Competence – insight	Scrutinise and reflect on social norms and relationships and lead action to change them.
Progression and Transfer	Not specified.
Articulation	Not specified.

4.2 APPENDIX 2: QQI APPROVED AND DELEGATED PROGRAMMES

Level	Approved Programmes	Delegated Authority
9	GMIT has institutional authority to approve research programmes in areas outside its established Delegated Authority. Applications for such approval are considered on a case-by-case basis.	Science Computing Mechanical Engineering Heritage Studies
10	Humanities & Creative Arts (Heritage Studies)*	Aquatic Science Mechanical Engineering

* areas where research had been conducted in GMIT prior to the establishment of QQI's *Policy on Research Accreditation*, and deemed to be 'approved' following an evaluation process.

4.3 APPENDIX 3: AUTHORSHIP CONVENTIONS

Introduction

This document seeks to guide and inform GMIT's researchers on the selection and order of authors involved in written publication of research outputs. Deciding on who qualifies as an author can be contentious and clarity on all the considerations involved will help ensure proper acknowledgment of the roles played by research collaborators.

Participants

There are two types of participants that contribute to published research.

1. **Sole investigator:** This comprises of one investigator who publishes a piece of work as the only author with no other participating parties. There are generally no authorship issues regarding the author.
2. **Multiple participants:** This comprises two or more investigators, researchers and/or participants who contribute to the study as internal and/or external collaborators. All postgraduate candidates within GMIT pursuing a research Master's or PhD are supervised by a supervisory panel and during the course of the research work may involve other collaborator(s) external to the supervisory panel. Such collaborative studies require careful determination of who qualifies as an author and who should be acknowledged.

Good practice

Supervisory panels and/or external collaborators have a responsibility to review, before submission, all prospective publications being prepared within their research teams. This helps to maintain the integrity, reputation and viability of the research collaboration by:

- Appropriately acknowledging principal investigators, collaborators, co-supervisors and relevant individuals/funding agencies as co-authors or contributors;
- Respecting relevant intellectual property agreements.

Agreement between research collaborators on authorship conventions should be reached at the outset of all new research studies.

Authorship Inclusion and Order

Authorship Inclusion

Every author should have contributed sufficiently to the entire research and take a reasonable level of responsibility for at least three of the following four criteria as recommended by International Committee of Medical Journal Editors (ICMJE, 2015; Clement, 2014):

1. Conception (initial idea/securing funding) or design of the work; or the acquisition, analysis or interpretation of data for the work.

2. Drafting the manuscript or revising it critically for structure, content or important intellectual content.
3. Approval of the final version to be published.
4. Agreement to be accountable for the work thus ensuring its accuracy or integrity.

Postgraduate students and post-doctoral researchers might not have an opportunity to contribute to the fourth criterion and some research team members might not be involved in routine data collection efforts. However, such contributors could still be fully engaged in the project on a continuous basis and should therefore be recognised as authors (Clement, 2014). Lead authors should meet all four criteria.

These four criteria should not be used as a means to disqualify colleagues from authorship by denying them the opportunity to meet criterion #2 or #3. Therefore, all individuals who meet the first criterion should have the opportunity to participate in the review, drafting and final approval of the manuscript (ICMJE, 2015).

When participants do not meet the authorship inclusion criteria, it may be appropriate to otherwise acknowledge their contribution to the research within the *Acknowledgement* section of the manuscript.

Authorship confers responsibility and should not be gifted to non-contributing individuals or institutions. Long and inclusive lists of authors are fine as long as these criteria are satisfied.

Authorship Order

Deciding on authorship order is a further consideration after determining the authorship. There are no universally accepted order criteria, expect that the first author contributes to most of the work. The position of subsequent authors can be decided by alphabetical order, seniority, or contribution. Alphabetical assignment is arbitrary and can lead to misconceptions by readers of the relative contributions of each author. A senior author can therefore appear in several places within the authorship order:

1. **First author:** This reflects the fact that they have provided the greatest intellectual contribution and has held the primary responsibility for collecting and analysing data, and for the writing of the manuscript and associated drafts. The first author should be accountable for the work.
2. **Joint first author:** Same as the first author, but there is an acknowledgement that the first two authors have contributed equally to the work and have shared first authorship.
3. **Last author:** This can also be considered as a senior author and is often assigned to a senior researcher or research group leader for a particular study. This position generally reflects their overall responsibility for the study and suggests that a level of mentorship has been provided.

Different publishers adopt various practices to indicate senior authorship (e.g. by using asterisks, underlining, placing the name first or last in the list of authors etc.).

Furthermore, funding agencies (e.g.: *Science Foundation Ireland and Health Research Board*) may require a certain number of senior authorships as eligibility criteria for application to their funding calls. However, where research is undertaken within multi-organisation, co-supervised studies, it may be decided that no single senior researcher exists in such collaborations.

To avoid ambiguity, determining authorship order by contribution, in a sequence-determines-credit approach, is becoming common practice. To ensure transparency, it is good practice to explicitly state within manuscripts the method used to assign authorship, and to indicate the contributions of each author (Tscharntke et al., 2007). This can be described efficiently in a few sentences within the acknowledgments section of manuscript submissions. Some journals, especially within the medical field, require the contribution to be explicitly stated during the submission phase. Objective methods are available to determine the relative contributions of each author (e.g. Clement, 2014) and these techniques may be applied.

Corresponding Author

The corresponding author should be a senior author that can remain responsible for the manuscript completion, correspondence during the submission and revision process, as well as handling subsequent correspondence after the conclusion of the study.

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An Roinn Oideachais
agus Scileanna
Department of
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