

PhD Research Handbook

School of Biomedical Science

FACULTY OF LIFE AND HEALTH SCIENCES

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Welcome from Postgraduate Tutor

I am delighted to welcome you to the School of Biomedical Sciences at Ulster University. I am sure you will benefit from and enjoy the time you spend working towards your PhD. Our aim is to equip you with the subject knowledge, research expertise and transferable skills that you will need to advance your research and technical abilities, whilst enhancing your future prospects. We hope you will also embrace the rich opportunities available at the University and in the thriving research community, have an enjoyable time, and meet new friends and colleagues.



Research, by its very nature, is challenging and postgraduate research even more so. Not only are you trying to discover or create new knowledge, but you are simultaneously learning how to do research effectively. You will need a high level of self-motivation and determination in order to make a significant contribution of your own. A PhD is very much what you will make of it, but your supervisors are there to guide you towards your research objectives and help you develop your abilities.

If you have any problems whilst at Ulster (whether academic, personal, or financial) you'll find that help and advice is always available. Please check through this Handbook - it will serve as a first source of information if you need help. Your main contact should always be your supervisors, but many others can offer advice and assistance – they are listed in the following pages. I hope you enjoy your studies here and I look forward to talking with you about your research. Good luck with your work.

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1. Introduction

Who is this handbook for and what does it contain?

This handbook has been prepared by the School of Biomedical Sciences to help PhD Researchers and their Supervisors find their way through the various School level administrative stages of the PhD Research Degree. This includes information on where to get help, staff responsibilities, procurement and travel arrangements, services, office safety, demonstration/ teaching opportunities and local guidance on initial, confirmation and final assessments.

The handbook supplements the information provided by the Doctoral College in relation to policies and procedures. More information provided by the doctoral college can be found here.

2. Staff Responsibilities and Contacts

School Structure and Staff responsibility

The School of Biomedical Sciences is part of the Faculty of Life and Health Sciences. The Faculty consists of seven Schools; the School of Biomedical Sciences, School of Geography and Environmental Sciences, School of Health Sciences, School of Nursing, School of Pharmacy and Pharmaceutical Sciences, School of Psychology and School of Sport.

The School of Biomedical Sciences, based at the Coleraine Campus, has seven distinct research centres and groups.

Nutrition Innovation Centre for Food and Health NICHE

Northern Ireland Centre for Stratified Medicine

Centre for Personalised Medicine

Diabetes Research Group

Genomic Medicine Research Group

Optometry and Vision Science Research Group

Pharmacy and Pharmaceutical Science Research Group

Key Facts

- Student Satisfaction: Human Nutrition, Biomedical Sciences & Stratified Medicine (100% NSS 2017)
- The cost and quality of student life in Coleraine and Derry/Londonderry is amongst the best in the UK (source Lloyd's bank 2017)
- Links with a wide range of international universities and industrial partners
- Ranked 4th in the UK Nutrition (GLT 2018)
- Ranked 1st in the UK for Optometry (The Complete University Guide 2020)
- 100 % Research environment Top Five UK universities for Biomedical Sciences Research (source: REF 2014)
- Distance Learning: Diverse range of online programmes, short courses and CPD opportunities

PhD Research Handbook - School of Biomedical Sciences

The School has a number of academic and administrative staff who support the PhD research within the school, a simplified structure for this is shown in Figure 1. These include the Research Director, Postgraduate Tutor and Academic Excellence Assistant. The Head of School, Professor Stephen McClean, oversees all teaching and research activities within the School. The Associate Head of School, Dr Declan McKenna, oversees activates related to teaching and learning, with the Research Director focusing on research activities.

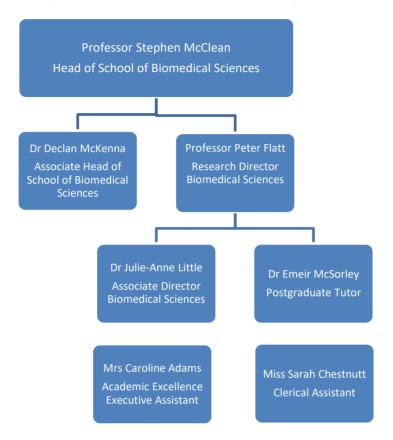


Figure 1. Staff structure within the School of BMS related to PhD Research

You and your Supervisor- The primary responsibility for organising your research work lies with you. It is your supervisor's responsibility to guide your research, point you in interesting directions, monitor your progress and generally provide moral and technical support. Supervisors differ in their methods, but you should normally expect to see your supervisor at least once a fortnight. Feel free to contact them at any time if you have a problem or are unsure how to proceed. You will find that you can obtain the most benefit from meetings with your supervisor if you prepare some material for them to read in advance or formulate some specific questions you would like to discuss.

Postgraduate Tutor- The BMS Postgraduate Tutor is responsible for the overall running of the School's PhD programme, with each research group have a group level postgraduate tutor providing pastoral support for PhD Researchers within each specific group. They are available to discuss any matter, personal or academic, in confidence.

For questions relating to your research or administrative process please contact the Research Director, Post Graduate Tutor or Administrative support directly.

Research Director	Postgraduate Tutor	Administrative Support
Prof Peter Flatt Room W1069 pr.flatt@ulster.ac.uk +44 28 7012 4419	Dr Emeir McSorley Room W2046 Em.mcsorley@ulster.ac.uk +44 28 7012 3543	Caroline Adams Room W1070 c.adams@ulster.ac.uk +44 28 7012 4163

Where to get Help.

There are a number of places you can look for help on policies and procedures.

- This Handbook: this handbook covers the majority of aspects relating to your PhD Research within the School.
- PhD Manager- Information on the various processes and forms involved with research study at Ulster can be found online in PhD manager.
- Your Supervisors. Consult your supervisors on all academic matters. The formal obligations and responsibilities of your supervisor are explained in the <u>University</u> Handbook.
- <u>Postgraduate Tutor</u>- For any queries regarding academic policies within the school or pastoral support.
- <u>Administrative Assistant</u> For queries regarding equipment, travel, budgets and general administration.
- Administrative problems- For issues concerning your funding, registration, fees etc., contact the <u>Doctoral College</u> directly.
- General Enquiries- ask at the School Office Room 16G24.
- Student Support- For complex problems around family, finances, health, disability, or other issues affecting your general welfare you should make an appointment to see a Student Support.
- Occupational Health- for information regarding occupational health and the services available.
- First Aid/ Defibrillator available from Coleraine Security- 22222 (DDI 02870123456). In event of an emergency requiring Police, Fire or Ambulance dial (9)999 directly then contact security immediately on extension 22222 (DDI 02870123456).

3. Working Environment

Research Facilities

In addition to conducting our own pioneering research, the Biomedical Sciences Research Institute (BMSRI) provides a diverse range of state-of-the-art equipment, specialist laboratories and infrastructure that can offer clinical and translational services to academic researchers and business.

<u>Bioimaging Core Facility</u> The bioimaging Core Facility provides a unique opportunity for access to imaging modalities rarely found within a single laboratory.

<u>Biomedical and Behavioural Research Unit</u> The Biomedical and Behavioural Research Unit (BBRU) offers services for pre-clinical studies and physiological measurements in rodents.

<u>Cell Technologies Unit</u> The facility is capable of completing any aspect of tissue culture for external companies.

<u>Genomics Unit</u> This research facility focuses on the application of genomics technologies so as to better understand human disease.

<u>Human Intervention Studies Unit</u> The Human interventions Studies unit (HISU) is dedicated to the carrying out of nutritional intervention trials on human volunteers.

<u>Mass Spectometry Centre</u> Ulster University Mass Spectometry Centre facility uses mass spectrometry techniques to support your research needs.

Translational Medicine Unit We aim to promote and facilitate translational and clinical research.

<u>Vision Science Unit</u> The vision science core facility gives external companies and agencies the opportunities to access expertise of the vision science staff and equipment.

About Our Research

The Biomedical Sciences Research Institute (BMSRI) spans a number of campuses and locations. It conducts pioneering strategically focused research into health and investigates the underlying causes, diagnosis, treatment and prevention of human diseases.

At the Biomedical Sciences Research Institute (BMSRI) we specialise in the study of the biological mechanisms associated with cancer, diabetes, heart disease, blindness and various diseases associated with the ageing population.

Our members conduct pioneering research in these areas, with a determination to investigate the underlying causes, diagnosis, treatment and prevention of human disease. We are also exploiting the remarkable opportunities made possible by recent molecular advances: revolutionary changes in biomedicine and biotechnology that will soon transform whole industries and economies.

Results from our research will transform our understanding of human biology and pathology by giving us a real understanding of their very complex molecular aspects. BMSRI is actively pursuing these goals by applying a range of rapidly developing techniques to a variety of problems in human health.

In addition we are committed to providing scientific support for the knowledge-intensive, high-added value biotechnological and biomedical industries, which are establishing themselves in Northern Ireland, and which may reasonably be expected to make substantial contributions to economic renewal.

Research Integrity A useful and compact guide to the responsibilities of those involved in research.

<u>People</u> Biomedical Sciences Research Institute staff, students and visitors.



Your Office Space

A desk within a shared office will be provided for you to work at whilst on campus. This will be arranged for you by your supervisors. These are generally in open plan office space. Offices are a mix of PhD Researchers and Research Staff. You should endeavour to make use of the knowledge you have available in your office. Typically, this space will include a clear desk space, a comfortable computing chair and a set of lockable drawers.

It is Researchers responsibility to keep these spaces tidy and to clear the space when leaving at the end of the PhD journey. Similiarily for those working in any kind of laboratory space, it is your responsibility to keep your area tidy

Computing Equipment

A Desktop or Laptop computer will be provided for you if needed. This should be discussed with your supervisors. In some cases, a new desktop/ laptop will need to pe purchased. If this is the case, money may be used from your Research Training Grant to support essential equipment. Your Supervisors can advise you further on this.

Lunch Facilitates

The CMB offers kitchen and lunch room facilities for all staff and Postgraduate Researchers. This includes:

- Lunch rooms with tables and chairs suitable for dining.
- Kitchen Facilitates, including a microwave and refrigerator are available within the CMB.
- A range of University facilities are available in the main building and the 'Doc'







Photocopying and Printing

Information Services (ISD) provide information on how to print including how to access multifunction devices (MFD) that will allow you to print, copy and scan documents. More information can be found on their <u>website</u>. ISD can also provide support with university wide IT services such as email and wifi.

Attendance & Absences

Attendance to University on a daily basis is expected, except by agreement of your supervisor or the Research Director. Hours should be agreed with your Supervisors. Typically, PhD

Researchers will work 35-40 hours per week, between core hours of 9:00am- 5:00pm. Holidays, as approved by the Supervisor are allowed within the period of the Studentship. These must not exceed a total of eight weeks including public holidays (40 days) per year. Any periods of sickness should be notified to your Supervisors.

If you experience some health, family or other problems that make it difficult for you to continue working on your PhD research project, you may need to consider applying for leave of absence. Funded PhD researchers should be aware that they may normally only be allowed Leave of Absence for a maximum of one year, and that their maintenance allowance is suspended during any Leave of Absence. It is also important to note that Leave of Absence is not permitted if the main reason is to take up paid employment. Should you need any advice on Leave of Absence you can ask you Supervisor. Support is also available through the Doctoral College and Student Support.

4. Research Integrity and Ethics

Ulster University requires the highest standards of professionalism in research conducted by all staff and students in all disciplines. Refer to the Research Office policy and procedures with regard to research practice, publications and intellectual property. All PhD researchers should act professionally in your role. Including the use appropriate email etiquette in a reasonable fashion and acting professionally in the office and around campus.

Research Integrity

Integrity is fundamental to the research process and an important component of our research environment, demonstrating to partners and funders that we undertake excellent quality research to a consistently high standard. The Pro-Vice-Chancellor for Research & Impact, Professor Cathy Gormley-Heenan, explains the importance of integrity in this short video.

The research integrity course is mandatory for all PhD researchers and **must be completed prior to undertaking the Initial Assessment**. This course is available via your <u>Blackboard</u> account.

Please note that all investigators named on applications to UREC, and via the IRAS system for studies in the NHS and HSC for which the University is sole or co-sponsor, are required to provide confirmation of successful completion before University approval will be granted.

Research Ethics

It is University policy that all research involving human participants must be reviewed through the filter and ethics committee process as appropriate.

It should be noted that, in many cases, review is a legal or regulatory as well as policy requirement (for example, research involving HSC/NHS patients and others in care, and research which requires the use of human cellular material) and in others it reflects accepted best practice (for example, research involving those aged under 18 and other potentially vulnerable people). Increasingly, in many disciplines, evidence of ethical review is required by editors before they will accept a paper for publication.

Studies covered by the University's policy include interview, questionnaire and focus group research as well as research involving interventions of any kind.

There are several reasons for this, including:

- reducing risk of harm;
- protection of participants, researchers and the reputation of the University;
- maintenance of insurance cover/indemnity;
- providing assurance to collaborating organisations, funders and publishers;
- maintaining and improving quality and standards; and
- demonstrating adherence to research integrity requirements

Details of the University's policies and procedures in this area are currently available through the <u>portal</u>. Please click on the Research Governance & Ethics tab. Early in your project you should discuss the Ethical implications of your work with your supervisor. If required, you should then make an ethical application.

Filter committees have been established in all of the areas of the University in which significant levels of human research are likely to take place The Biomedical sciences ethical filter committee is co-chaired by Dr Maria Mulhern (m.mulhern@ulster.ac.uk) and Dr Julie McClelland (if.mcclelland@ulster.ac.uk). Ethical submission to the filter committee is via the portal, your supervisors will make you aware of this as required.

5. Health and Safety

Laboratory and Office Safety

It is everyone's duty to ensure a safe working environment. Your first point of contact if you have a health and safety query should be your supervisor. The Schools Health and Safety Co-Ordinator is <u>Liadhan McAnena</u> Risk assessments are carried out and updated annually. First Aid/Defibrillator available from Coleraine Security- 22222 (DDI 02870123456).

In event of an emergency requiring Police, Fire or Ambulance dial (9)999 directly then contact security immediately on extension 22222 (DDI 02870123456). If working late you should make security aware and let them know when you leave.

Fire Safety

If you discover a fire, activate the alarm immediately using nearest break glass point. On hearing alarm,

- You must leave the building using the nearest available route by following the emergency exit signs
- You must go directly to the assembly point- Carpark 9
- You must not re-enter the building until told it is safe

Fire marshals sweep each floor in the event of an evacuation. The alarm is tested in Coleraine at 1:10pm and 6:10pm every Wednesday.

6. Training and Research Community

The School of Biomedical Sciences provides a number of forums to engage and immerse yourself in the vibrant research community. These can help with skills development and feedback on your own research ideas.

Training

In addition to the <u>Researcher Development Programme</u> (RDP) at Ulster which covers generic research and transferable skills, the School occasionally offers focused training courses on technical aspects including writing, . If you have an idea for a training course which you feel may be useful for a number of Researchers within the School; please contact the Postgraduate Tutor or Research Director. Your Research Training Grant can also be used to attend more specific training needs as agreed with your supervisors.

During the year within the Biomdecial Sciences Institute there will be adhoc guest lectures, with national and international speakers presentating on a range of topics. When these lectures occure they are advertised in advance and researchers are encourgaed to attend and expand ther knowledge base.

Within many groups a journal club or equivalent is offered these informal seminars are designed to give PhD Researchers an opportunity to share their research in a supportive environment, with their student peers and interested academic colleagues



7. Travel and Procurement Procedures

As a Research student it is expected that you will try to attend at least one academic conference during your studies, in order to present your work to a wider audience. Talk to your supervisor about how to fund such trips. Funded PhD awards have Research training Grants that can also be used to travel to conferences and attend training events. Additionally, many organisations, including the University, have travel awards for which you may apply for.

Agreement for travel & accommodation must be sought from your supervisor prior to proceeding with any booking, once confirmed please contact the School Office to obtain the relevant prior approval and expenses paperwork.

It is expected that, prior to travelling to a conference, you will present at the Doctoral Research Seminar Series (DRSS). You should contact the Post Graduate Tutor to arrange this.

Travel Procedures

Prior to Travel

- Check with your Supervisors
- Complete a Prior Approval (PA) Form, available from the School Office.
- Have this form signed by your supervisor.
- Take the signed form to the School Office for Approval from the Research Director or Head of school.
- Once approved a Prior Approval number will be returned. This can be used to book travel through Key Travel following the University's <u>travel policy</u>.

After Travel

- Receipts for expenses incurred whilst travelling can be claimed back.
- This includes: food and transport (no Alcohol)
- Complete a Travel Subsistence claim form.
- Attach original receipts formatted appropriately.
- Have this signed by Supervisor.
- Take the completed form, along with receipts to the School Office for approval by Research Director or Head of School.



8. Demonstration and Teaching Opportunities

Many PhD researchers help with the teaching and marking within the School. For example, they may support workshops and demonstrating in the undergraduate laboratories. If you are interested, please discuss with your supervisor and inform the coordinator for Demonstrators (details below). Practical Laboratory Assistance within modules is facilitated by current PhD Students who have completed the course, 'Introduction to Teaching and Learning for Postgraduate Tutors and Demonstrators'.

Applications are invited prior to the commencement of each new semester and demonstrators are allocated according to their area of specialism and experience. This is an opportunity for practical laboratory and assessment experience which contributes to the Students' employment record and also for an opportunity for financial benefit. PhD Researchers can do up to 6 hours per week in demonstration. This can cover a Can cover a range of practical skills including programming, professional issues and communication skills.

There may also be opportunities to take lectures and seminars, and to carry out assessment marking. All of these activities are useful for your CV should you wish to remain in academia.

Reasons to do lab demonstration

- Builds your CV (particularly if you want to stay in academia).
- Gets you talking to staff you may not necessarily talk to.
- Gives you some extra money.
- Become a part of the wider team.
- It's rewarding!

Lab Demonstration is co-oridnated by the School office

If you are interested in demonstrating, contact: Mrs Evie Drennan who is the coordinator for Demonstrators and can be contacted at: e.drennan@ulster.ac.uk or on ext. 23625



9. Assessments

During your research journey, there are a number of key milestones which you will be expected to achieve within specific timeframes. This table provides you with an overview of what is expected of you. General information about these milestones can be found on the doctoral college website. The table below provides some rough guidelines of when each of these assessments will take place. The School may adjust the timing in order to better accommodate the assessments within the academic calendar.

Process	When (full time)	When (part time)
Re-enrolment	Around mid-September, annually	Electronically, every summer
Initial Assessment	Within four months of first registration. Typically, these occur January	Within ten months of first registration
Annual report	First week in May, annually	First week in May, annually
Confirmation Assessment	Between eight and twelve months of first registration, Typically, these occur June.	Between twelve and twenty-four months of first registration
Final Assessment	Within thirty months of first registration	Within sixty months (PhD) or thirty-six months (MPhil) of first registration
Intention to Submit	Three months before proposed submission date	Three months before proposed submission date
Submission of thesis	Within thirty-six months (PhD) or twenty-four months (MPhil) of first registration	Within seventy-two months (PhD) or forty-eight months (MPhil) of first registration

The following sections provide School specific guidance for the Initial, Confirmation and Final assessment. Dates and times for each of these assessments will be communicated to you by the School.



Assessment information:

You may wish to include assessment information for all three assessments (initial, confirmation and final) to include when they happen, details of required written submission and presentation (if appropriate) as well as information on who will be there, who does the assessment, how long it takes, when a decision will be made and when/how it will be communicated to them.

BMSRI initial, confirmation and final Assessment.

Convening of the assessment day for initial assessment (January, month 4) conformation assessment (June, month 9) will be organized by each research group (Diabetes, Genomic Medicine, NICHE, Optometry and Vision Science, Pharmacy and Pharmaceutical Sciences, Precision Medicine, Stratified Medicine, (www.ulster.ac.uk/research/topic/biomedical-sciences/research). The Research Group Leader (RGL), Associate Research Group Leader (ARGL) or Research Group Post Graduate Tutors (PGT) as appropriate will organize this process for each group within the BMSRI. Guides for Initial/Confirmation and Final assessment process https://phdmanager.ulster.ac.uk/do/activity/guides/all

Each assessment will take the form of submission of a written report of project and progress, along with an oral presentation. This will be assessed by two appointed individuals, one within and one outside the research group.

Initial Assessment

The stepwise workflow for the initial Assessment is built into PhD Manager. The process is as follows:

- 1. PhD Researcher completes initial Assessment report. For each research group the RGL/PGTs will inform PhD researchers of the specific date (Jan, month 4) on which to submit their report via PhD manager.
- 2. The RGL/ARGLs/PGT will an organise assessment panel (presentation) for the PhD researcher(s).
- 3. The PhD Supervisor will complete their report form via PhD manager.
- 4. The PhD researcher completes assessment process (Presentation). Initial assessment report completed by assessors including recommendation.
- 5. The Research Director will approve confirmation assessment report via PhD manager.

Initial Assessment Information for PhD researcher and staff.

The written report is minimum of 4 and maximum of 8 A4pages excluding diagrams, tables and figures. Font - Times new roman, size 12, line spacing 1.5. Referencing convention is British Harvard as per University guidance. The written report should be submitted no less than one week prior to the oral presentation assessment.

The project report and associated oral presentation (initial assessment) must include information on:

- (1) the project background;
- (2) the overall aim of the investigation;
- (3) the methods to be employed;
- (4) the objectives to be achieved within the first year of registration

The presentation should be of 15 minutes duration, followed by a 5 minute discussion period. Projection/PowerPoint facilities will be available.

Confirmation Assessment

The stepwise workflow for the Confirmation Assessment is built into PhD Manager. The process is as follows:

- 1. PhD Researcher completes Confirmation Assessment report. For each research group the RGL/PGTs will inform PhD researchers of the specific date (June, month 9) on which to submit their report via PhD manager.
- 2. The RGL/ARGLs/PGT will an organise assessment panel (presentation) for the PhD researcher(s).
- 3. The PhD Supervisor will complete their report form via PhD manager.
- 4. The PhD researcher completes assessment process (Presentation). Confirmation assessment report completed by assessors including recommendation.
- 5. The Research Director will approve confirmation assessment report via PhD manager.

Information for PhD researcher and staff.

The written report is a minimum of 6 and maximum of 15 A4 pages excluding diagrams, tables and figures. Font - Times new roman, size 12, line spacing 1.5. Referencing convention is British Harvard as per University guidance. The written report should be submitted no less than one week prior to the oral presentation assessment. The project report and associated oral presentation (confirmation assessment) must include information on:

- (a) the project background;
- (b) the overall aim of the investigation;
- (c) the methods employed;
- (d) data obtained to-date:
- (e) the proposed program for future PhD work;

or, in the case of those intending to complete at MPhil stage, the program for completion of practical and written work within the next twelve months.

The presentation should be of 20 minutes duration, followed by a 10 minute discussion period. Projection/PowerPoint facilities will be available.

Final Assessment, will be due in month 30. Supervisor in consolation the PhD researcher will submit a report on PhD researcher progress to the RD via PhD manager. No formal report or presentation will be required at this point, but research groups are welcome to solicit oral presentation from researcher for their own meetings.

10. Contacts

You may wish to include contact details for Postgraduate Tutor/Business Support/Finance/Ethics/Technical

Research Director, Prof Peter Flatt; pr.flatt@ulster.ac.uk

Associate Research, Director Dr Julie-Anne Little; ja.little@ulster.ac.uk

UoA administration (PhD manager), Mrs Caroline Adams, c.adams@ulster.ac.uk

BMS Post Graduate Tutor – Dr Emeir McSorley, em.mcsorley@ulster.ac.uk

Health and Safety Officer Dr Liadhan McAnena. I.mcanena@ulster.ac.uk

Technical Facilities Manager Mr Danny Coulter; d.coulter@ulster.ac.uk

School Manager (Administration) Ms Lyndsey George, lj.george@ulster.ac.uk

Finance - Mrs Karen Haggan, k.haggan@ulster.ac.uk

Research Group Leaders

Diabetes Prof Peter Flatt, pr.flatt@ulster.ac.uk

Genomic Medicine - Prof Colm Walsh, cp.walsh@ulster.ac.uk

NICHE Prof Helene McNulty, h.mcnulty@ulster.ac.uk

Optometry and Vision Science, Dr Julie-Anne Little, ja.little@ulster.ac.uk

Pharmacy and Pharmaceutical Science, Dr Mateus Webba De Silva, mm.webba-da-

silva@ulster.ac.uk

Stratified Medicine/Personalised Medicine, Prof Tony Bjourson, aj.bjourson@ulster.ac.uk

