SCHOOL OF BIOLOGICAL SCIENCES

INSTITUTE FOR GLOBAL FOOD SECURITY

POSTGRADUATE RESEARCH HANDBOOK

2019/20
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RESEARCH OVERVIEW

Our Research Ethos

The School of Biological Sciences aims to enhance the way we use technology in research, food security, microbiology, ecosystem biology, sustainability and many other related areas. The three research clusters are detailed below. All academics and research students are affiliated with one of these clusters and may participate in a range of cluster-specific activities, such as seminars and symposia.

- **Food Safety and Nutrition (FSN)**
  
  The primary focus of the Food Safety and Nutrition cluster resides in fundamental and applied research linking key aspects of food production, food safety and security, animal and human nutrition and health, and consumer behaviour.

  The group encompasses a wide range of expertise and technical skills across diverse fields including: advanced molecular biology and bioinformatics; cell biology signalling; microbiology; analytical chemistry; geochemistry; high level spectroscopy and spectrometry analysis; proteomic and metabolomic analysis; recombinant protein expression and peptide engineering; immunoassay and biosensor design; food chain traceability systems; risk perception and communication; animal and human nutrition; and food pathogen detection and control.

  [https://www.qub.ac.uk/schools/SchoolofBiologicalSciences/Research/FoodSafetyNutrition/](https://www.qub.ac.uk/schools/SchoolofBiologicalSciences/Research/FoodSafetyNutrition/)

- **Ecosystem Biology and Sustainability (EBS)**

  Members of this research group are involved in a wide range of projects in ecosystem biology and sustainability. Research includes broad areas of ecology (marine, freshwater and terrestrial); behavioural ecology; ecophysiology, animal behaviour; molecular ecology;
conservation (including conservation genetics); aquaculture; systematics (both molecular and morphological); and environmental economics.

This diverse range of interests is linked by common approaches including the integration of theoretical, laboratory, field and economic investigations.

https://www.qub.ac.uk/schools/SchoolofBiologicalSciences/Research/EcosystemBiologySustainability/

- **Microbes and Pathogen Biology (MPB)**

The primary focus of the Microbes and Pathogen Biology research group is the study of fundamental biological processes in cells, microbes and parasites as well as applied processes in environmental microbiology, parasitology and disease control. The group provides a broad platform of fundamental and applied expertise in the biosciences, including: molecular biology; cell biology and cell signalling; microbial biochemistry and genomics; stress metabolism; bioremediation; parasite biology, physiology and therapeutics; protein biochemistry, expression and engineering; peptide/protein modelling and synthesis; nucleic acid structure and function; bioimaging.

This diverse array of interests, ranging from protein modelling, through microbiology to parasite control, is linked by common approaches within the molecular biosciences that are aimed at exploiting the ongoing genomic, transcriptomic/proteomic revolution. The molecular microbiology component is heavily involved with QUESTOR, a successful International Industry/University Co-operative Research Centre.

The MPB cluster has a wide range of strong international links across Europe, Asia and North America.

https://www.qub.ac.uk/schools/SchoolofBiologicalSciences/Research/MicrobesPathogenBiology/

The Institute for Global Food Security at Queen’s University Belfast was founded in 2013 to provide a world-leading commitment to research in food security. The Institute is a key partner in national and global efforts to provide the world’s growing population with a sustainable, safe and secure supply of high quality food. Increasingly, many aspects of our research are carried out in collaboration with world-leading colleagues and research centres in Europe, Asia and North America.

The research of the Institute falls within three grand challenges:

- **Farms for the Future**
- **Global Food Integrity**
- **Food, Nutrition and Health**

At a time when the world’s population is growing at its fastest ever rate, food security is a major global challenge. The Institute for Global Food Security aims to play a major role in delivering safe, sustainable and authentic food to the world’s population, and has become globally recognised for its excellence in research. Responsive, high-quality education is essential to ensure the agri-food sector remains innovative, sustainable and globally competitive. To secure this success, our teaching draws on excellence in areas as diverse as nutrition, diet and health, chemical engineering, biomedical sciences and biochemistry.

https://www.qub.ac.uk/Research/GRI/TheInstituteforGlobalFoodSecurity/
KEY FACILITIES

New Building

Opened in early 2019 at Chlorine Gardens, the new School/Institute building provides the facilities to help grow our life sciences sector, especially in areas such as agriculture/food science, food safety, disease/infection biology, diagnostics, waste management, ecosystems and the environment.

Advanced Informatics (MHLS Faculty Core Technology Unit)

The Advanced Informatics Core Technology Unit provides access to a comprehensive spectrum of data collection, data management, integration, linkage, exchange, reuse, analytics tools and data modelling expertise. It also:

- Identifies and implements strategic enhancements to data management so as to realise the vision of a semantic “mind” to provide an ability of actionable intelligence.
- Establishes and maintains a comprehensive and systematic research data management framework consisting of an integrative “fabric” of people, policies and technologies.
- Designs, delivers, manages and optimises a suite of software tools that support “lifecycle” management of data resources and consultative needs.
- Identifies and supports data needs through the appropriate selection, implementation and management of technology platforms.

[https://www.qub.ac.uk/sites/core-technology-units/AdvancedInformatics/](https://www.qub.ac.uk/sites/core-technology-units/AdvancedInformatics/)
Mass Spectrometry (MHLS Faculty Core Technology Unit)

The main objectives of the Mass Spectrometry Core Technology Unit are to:

- Undertake and facilitate high quality mass spectrometry based research.
- Provide access to high end mass spectrometers and develop innovative applications for life-scientists and clinicians.
- Provide high quality training to undergraduate/postgraduate students and researchers.

[https://www.qub.ac.uk/sites/core-technology-units/MassSpectrometry/](https://www.qub.ac.uk/sites/core-technology-units/MassSpectrometry/)

Genomics (MHLS Faculty Core Technology Unit)

The aim of the Genomics Core Technology Unit is to enhance research by providing access to the latest genomics technology.

A significant investment in state-of-the-art equipment enables support of a range of genomics applications, with a particular focus on Next-Generation Sequencing (NGS). The GCTU provides an increasing range of off-the shelf NGS services and will also work with research teams to develop bespoke projects that exploit the power of NGS applications to enhance research outputs.

The GCTU is a not-for-profit service provider for the research community and is equipped with state-of-the-art next generation sequencing platforms. Coupled with complementary robotics, sequence capture and array capabilities, it offers optimum, tailor-made solutions across a wide range of biological applications.

[https://www.qub.ac.uk/sites/core-technology-units/Genomics/](https://www.qub.ac.uk/sites/core-technology-units/Genomics/)

Advanced Imaging (MHLS Faculty Core Technology Unit)

The goal of the Advanced Imaging Core Technology Unit is to strengthen research capabilities and promote research excellence at Queen's by providing training and access to cutting edge microscopy, imaging equipment, techniques and imaging analysis.

[https://www.qub.ac.uk/sites/core-technology-units/AdvancedImaging/](https://www.qub.ac.uk/sites/core-technology-units/AdvancedImaging/)

Biosensor Technologies

For more than a decade the Advanced Asset laboratory has been pioneering the use of biosensor technology in the area of food safety monitoring and is recognised as a world-leading research group in this area. The group are experts in the development of highly innovative sensor based detection systems relating to biological and chemical contaminants in foods of pertinence to food integrity, safety, defence, quality and sustainability. Examples of such contamination include: naturally occurring toxins of fungal, algal, plant and bacterial origin present in the environment (e.g. mycotoxins and marine biotoxins); improper use of agrichemicals (e.g. antibiotics, pesticides); the illegal use of
growth promoting compounds in animal production (e.g. B-agonists); by-products from food processing (e.g. acrylamide, allergens); and food-borne pathogens.

In addition to the traditional enzyme and luminescence based immunoassay design capabilities (e.g. ELISA and LFDs) the ASSET centre hosts a suite of optical (e.g. SPR, planar waveguide, Lumines XMap) and electrochemical (e.g. Palmsens) biosensor platforms with full capabilities in printing technology for developing nanosensing lab on a chip nucleic acid or proteins multiplex arrays. To complement these platforms are the molecular and protein tools for characterisation, e.g. PCR, RT-PCR, 2D gel electrophoresis and imager, Western blots, nanodrop and bioanalyser. The Institute has top class Category 2 mammalian and bacterial cell culturing facilities for phage protein and monoclonal antibody production, and for the utilisation of algal and bacterial cultures for developing and validating biosensor methods of analysis for toxin and pathogen detection.

https://www.qub.ac.uk/Research/GRI/TheInstituteforGlobalFoodSecurity/Facilities/BiosensorTechnologies/

Elemental Analysis

The Elemental Analysis facility in the Advanced Asset laboratory features ICP-MS, light stable isotope mass spectrometry, desktop XRF and Dionex. The Agilent ICP-MS is used for low-level total elemental analysis in acid/alkali digests (such as arsenic, antimony, cadmium, selenium, iodine, phosphorus, lead, copper, zinc, etc.) and lead isotopes. It is coupled to Dionex to enable anion speciation, predominantly arsenic speciation, in a range of matrices such as waters, animal tissues, plants, soils and urines. The Sercon mass spectrometry is dedicated to C, N, H, S and O isotopes in solid samples including animal and plant tissues and soils. The Rigaku XRF complements the ICP-MS as it has better coverage of macro-elements (calcium, potassium, magnesium, sulphur, silicon, phosphorus) in a wide range solid samples. The standalone Dionex is used for nutrient anion and cation (nitrate, nitrite, ammonium, chloride, fluoride, phosphate, sulphate, etc.) in water samples.

https://www.qub.ac.uk/Research/GRI/TheInstituteforGlobalFoodSecurity/Facilities/ElementalAnalysis/

Spectroscopic Fingerprinting

Within the ASSET Centre there is a wide range of spectroscopic instrumentation for use in untargeted and targeted analysis. This includes the high end iS50 multi-spectroscopic instrument (FT-IR, NIR, Raman), i55 FT-IR, Antaris II NIRS, Delta Nu Raman (1064nm) and various handheld instruments, e.g. SCiO NIR, Micro-NIR, Spectrolytic MIR. Analysis using the spectroscopic techniques gives rise to unique fingerprint profiling and, coupled with powerful chemometric software, can produce application models for qualitative and quantitative analysis. Models have been developed to detect adulteration in a wide range of commodities at risk from fraud. These include edible oils and feed oils, herbs and spices and soya bean meal. Bespoke proximate analysis models using NIR have also been developed in conjunction with animal feed companies.

https://www.qub.ac.uk/Research/GRI/TheInstituteforGlobalFoodSecurity/Facilities/SpectroscopicFingerprinting/

Agri-Plas

The Centre for Plasma in Agri-Food (AgriPlas) is a dedicated research facility investigating a new technology with potential to reduce chemicals and antibiotics in the food chain.

AgriPlas is the first of its kind in Europe. Its focus is not only on pioneering research into cold plasma – ionised gases or liquids that have antimicrobial properties – but also the potential commercial applications.

AgriPlas will work closely with the Northern Ireland, UK and European agri-food industry on a number of projects to explore the use of plasma technology in, for example, veterinary treatments, prolonging shelf life of agri-food products and farm biosecurity.

https://daro.qub.ac.uk/agriplas-igfs-amr
Marine Laboratory

Queen's University Marine Laboratory (QML), Portaferry, is a research laboratory that serves the School of Biological Sciences and the School of Natural and Built Environment. It hosts the Modiolus Restoration Research Group (MRRG) which aims to restore the Strangford Lough Special Area of Conservation (SAC) back to Favourable Conservation Status (FCS). Facilities in Portaferry are used by resident staff and students as well as associated researchers from Queen's University and international visitors.

The facilities include field-based teaching space, meeting facilities, modern laboratories, small boats, professional scientific diving, indoor and outdoor aquarium facilities with running seawater, mesocosms for highly replicated experimental ecology, and the engineering wave basin facility. Measuring 18 x 16m with an operating depth of up to 0.65m, and powered by a 24 paddle Wave Maker, the basin can produce regular and random waves to test scale model devices and wave interactions.

https://www.qub.ac.uk/research-centres/QueensUniversityMarineLaboratory/

Animal Behaviour Laboratory

This research facility comprises the latest behavioural analysis software, together with a range of behavioural recording equipment, and is used in research into commercially farmed animals’ environment and welfare.

Northern Ireland Clinical Research Facility

Based within NHS Premises with services to support nutrition as well as a range of other disciplines, the Northern Ireland Clinical Research Facility enables broader clinical research on societal health, wellbeing and ageing.

https://www.qub.ac.uk/research-centres/TheWellcomeTrust-WolfsonNorthernIrelandClinicalResearchFacility/
KEY CONTACTS

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REGISTRATION

All postgraduate research students must be fully registered at all times until they submit the final hardbound copies of their thesis. Details of what you must do in order to register are provided in the table below.

Please note that the University's main Enrolment and Registration process is held annually in September. If you are a new research student with a start date in September or October you will register as part of this process (see notes in the table below). If you are already registered as a student, you must renew your registration during each annual E&R process (see Returning Postgraduate Research Student section in the table below). The only students exempt from this are those who are on a University-approved leave of absence.

If you do not complete registration you will receive communication from Student Services and Systems to bring the issue to your attention. If you then fail to complete registration by the deadline specified by Student Services and Systems you will be withdrawn from the University.

<table>
<thead>
<tr>
<th>Category of student</th>
<th>Actions required to complete registration</th>
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<tbody>
<tr>
<td>New postgraduate research student</td>
<td><strong>UK/EU students</strong></td>
</tr>
<tr>
<td></td>
<td>1. Log-in to QSIS with username (student number) and password (provided in communication from Student Services and Systems).</td>
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<td></td>
<td>Visit Self Service &gt; Student Centre to access the Registration Wizard. Follow the instructions to complete all 10 steps.</td>
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<td>2. Attend for ID and qualifications check. Visit the front desk on the first floor of the Student Guidance Centre (unless your start date is in September/October, in</td>
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<tr>
<td>See <a href="http://www.qub.ac.uk/welcome">www.qub.ac.uk/welcome</a></td>
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</table>
which case Student Services and Systems will provide you with details of where and when to attend).

You must bring original documentary evidence of your entrance qualifications (with a certified English translation, where applicable), sponsor letter (if applicable) and either a current UK/EU passport OR an EU National Identity Card. If you do not have either of these documents, contact reghelp@qub.ac.uk for advice.

**Non-UK/EU/EEA/Swiss national students**

1. Attend for Right to Study check. This can be done when you attend for ID and qualifications check (see above) or by appointment via: http://www.qub.ac.uk/sites/iss/international-welcome-and-orientation/.
   
   You must bring your passport, visa, and ATAS Certificate (if applicable).

2. Follow steps 1 and 2 under UK/EU students, above.

**Returning postgraduate research student**

Log-in to QSIS with username and password and visit Self Service > Student Centre to access the Registration Wizard. Follow the instructions to complete all steps.

The table below shows each available registration status and details points to note in relation to these.

<table>
<thead>
<tr>
<th>Registration status</th>
<th>Points to note</th>
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<tr>
<td>Full-time</td>
<td>Standard registration status.</td>
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<tr>
<td>Part-time</td>
<td>Not available to overseas students on a PBS Tier 4 visa.</td>
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<tr>
<td>Thesis Only</td>
<td>Available for a twelve-month period only to students who have completed all research required for their thesis and have been enrolled for the normal period of study for their research degree programme. For information on what constitutes the normal period of study for your research degree programme, please refer to section 4. Period of Study of the University's Study Regulations for Research Degree Programmes: (<a href="http://www.qub.ac.uk/directorates/AcademicStudentAffairs/AcademicAffairs/GeneralRegulations/StudyRegulations/StudyRegulationsforResearchDegreeProgrammes/">http://www.qub.ac.uk/directorates/AcademicStudentAffairs/AcademicAffairs/GeneralRegulations/StudyRegulations/StudyRegulationsforResearchDegreeProgrammes/</a>) Please note that the academic year for postgraduate research students begins on 1 October. Therefore, if you are due to register on Thesis Only status after 1 October (for example, in November or December) you will be liable to pay standard fees from 1 October until your date of Thesis Only registration, in addition to the Thesis Only fees which you will pay subsequently.</td>
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</table>
Graduation Only
A student’s registration status is changed to Graduation Only by Student Services and Systems when the student submits the first version of their thesis. No tuition fees are incurred during registration on Graduation Only status.

Thesis Resubmission
A student’s registration status is changed to Thesis Resubmission by Student Services and Systems when the outcome of the student’s viva is that they must revise and resubmit their thesis. Students are asked to pay a resubmission charge.

BIOLOGICAL SCIENCES/INSTITUTE FOR GLOBAL FOOD SECURITY INDUCTION

<table>
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<th>Event</th>
<th>Time and date</th>
<th>Location</th>
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<tr>
<td><strong>PGR Welcome/Induction</strong></td>
<td>Wednesday 2 October 2019</td>
<td>Biological Sciences Building</td>
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<td></td>
<td>14.00 pm – 15.30 pm</td>
<td>LG/012</td>
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<td><strong>Introduction to IT and Library</strong></td>
<td>Thursday 3 October 2019</td>
<td>McClay Library Training Room 2</td>
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<td></td>
<td>14.00 pm – 15.00 pm</td>
<td>Ground Floor</td>
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<td><strong>Information Services Training – Big 4 Databases for Biological Sciences</strong>*</td>
<td>Friday 4 October 2019</td>
<td>Medical Biology Centre</td>
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<td></td>
<td>13.00 pm – 15.00 pm</td>
<td>Teaching Room 1</td>
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<td></td>
<td>Friday 8 November 2019</td>
<td>Medical Biology Centre</td>
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<td></td>
<td>11.00 am – 13.00 pm</td>
<td>01/114</td>
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<td><strong>QSIS (Queen’s Student Information System) Training</strong></td>
<td>Tuesday 8 October 2019</td>
<td>David Keir Building</td>
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<td></td>
<td>14.00 pm – 15.00 pm</td>
<td>0G/339</td>
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<tr>
<td><strong>Health &amp; Safety/COSHH Risk Assessment (MANDATORY)</strong></td>
<td>Tuesday 8 October 2019</td>
<td>Biological Sciences Building</td>
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<td></td>
<td>9.00 am – 11.00 am</td>
<td>Seminar Room 1</td>
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<tr>
<td><strong>Demonstrator Training</strong></td>
<td>Wednesday 9 October 2019</td>
<td>David Keir Building</td>
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<td></td>
<td>10.00 am – 12.30 pm</td>
<td>0G/339</td>
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<tr>
<td><strong>Information Services Training – Referencing for Biological Sciences</strong>*</td>
<td>Thursday 17 October 2019</td>
<td>Medical Biology Centre</td>
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<td></td>
<td>13.00 pm – 15.00 pm</td>
<td>0G/121</td>
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<td></td>
<td>Thursday 21 November 2019</td>
<td>Medical Biology Centre</td>
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<tr>
<td></td>
<td>12.00 pm – 14.00 pm</td>
<td>0G/105</td>
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*Requires registration via MyFuture: [https://qub-csm.symplicity.com/students/](https://qub-csm.symplicity.com/students/)

FEES
Up-to-date information on tuition fees for postgraduate research students is available on the University website at [https://www.qub.ac.uk/Study/PostgraduateStudy/TuitionFees/#PGRFees](https://www.qub.ac.uk/Study/PostgraduateStudy/TuitionFees/#PGRFees).

SCHOLARSHIPS AND AWARDS
The Scholarships and Awards Regulations Handbook contains details of all scholarships and awards available across the University. It may be accessed from the Academic and Student Affairs website: [https://www.qub.ac.uk/directorates/AcademicStudentAffairs/AcademicAffairs/ScholarshipsandAwards/ScholarshipsandAwardsHandbook/](https://www.qub.ac.uk/directorates/AcademicStudentAffairs/AcademicAffairs/ScholarshipsandAwards/ScholarshipsandAwardsHandbook/)
THE GRADUATE SCHOOL: TRAINING, DEVELOPMENT AND SUPPORT

The Graduate School opened in 2015 in the Lynn Building on the main Queen’s campus. It is a dedicated postgraduate facility with a whole range of related activities running throughout the year to support postgraduates. The building features a dedicated silent study area, group study rooms and rooms that are bookable for conference use.

At Queen’s you are expected to undertake thirty days of training and development (internal and/or external) during the course of your PhD. The Graduate School administers the Postgraduate Development Programme which exists to support research students in the development of research skills and to enhance their employability through career and personal development. Full details of the Postgraduate Development Programme are available at: https://www.qub.ac.uk/graduate-school/development/postgraduate-research-development-programme/

The Graduate School also offers one-to-one professional support and employability workshops to support postgraduates with the next step in their career. For details, visit: https://www.qub.ac.uk/graduate-school/development/pgr-employability-careers-guidance-support/.

Funding is available to assist current postgraduate students in organising academic events and cultural interventions, which work to bring together the wider communities within both postgraduate taught and postgraduate research student bodies at Queen’s. Visit the Graduate School website for full information on all that it has to offer the postgraduate community: http://www.qub.ac.uk/graduate-school/

RESEARCHER PLUS AWARD

The Researcher Plus Award is an opportunity for postgraduate research students to gain official University recognition for their range of skills achieved in addition to their research. For further information, see: https://www.qub.ac.uk/graduate-school/development/researcher-plus/.
THE MCCLAY LIBRARY

The McClay Library, located on College Park Avenue to the rear of the main campus, brings together wide-ranging library, computing and media services in a single location as well as offering facilities for quiet study and group work.

Other libraries at Queen’s include the Medical Library in the Mulhouse Building (Belfast Royal Victoria Hospital, Mulhouse Road) and the Biomedical Library (Medical Biology Centre, Lisburn Road). Full details of all library features and services, and how to access them, are available at: https://www.qub.ac.uk/directorates/InformationServices/TheLibrary/.

Mr Patrick Elliott, Biological Sciences Subject Librarian, is contactable at: p.elliott@qub.ac.uk.

HELP/STUDENT SUPPORT SERVICES

Any comments, questions, or concerns in relation to your studies may be directed to the Postgraduate Research Administrator (p.millar@qub.ac.uk) or to the Chair of the School/Institute Postgraduate Research Committee (k.farnsworth@qub.ac.uk).

Details of the full range of student support services is available on the University’s website: http://www.qub.ac.uk/Study/StudentSupportServices/

Ms Rachel Powell, the Students’ Union’s Postgraduate Student Officer, holds a weekly drop-in session at the Graduate School for any students who require assistance (su.vppostgraduate@qub.ac.uk).

The Student Maternity, Maternity Support and Adoption Policy is available at: https://www.qub.ac.uk/directorates/AcademicStudentAffairs/AcademicAffairs/GeneralRegulations/Policies/StudentMaternity/

The MHLS Faculty employs a teaching associate, Mr Justin O’Hagan, who provides support in the academic use of English. For information, please contact the Postgraduate Research Administrator (p.millar@qub.ac.uk).
DEMONSTRATING

- All postgraduate students may have the opportunity to carry out demonstrating duties for undergraduate practical classes during their postgraduate studies. The University strongly encourages students to take such opportunities as part of their professional development.

- Students are required to take at least one teaching course for academic staff prior to, or within six months of, first taking up demonstrating duties: [https://www.qub.ac.uk/directorates/AcademicStudentAffairs/CentreforEducationalDevelopment/CoursesEventsProfessionalRecognition/] Students must also familiarise themselves with the University’s Equality and Diversity Policy: [https://www.qub.ac.uk/directorates/HumanResources/diversity-and-inclusion/policies-procedures-and-guidance/]

- Students will be emailed to ascertain their availability and a draft timetable will be circulated. Students who wish amendments to be made to the timetable for demonstrating must make this known by the date specified.

- Demonstrator training will be held on a specified date in October. In 2019, the training will be held on Wednesday 9 October at 10.00 am in Seminar Room 2 of the Biological Sciences building. All students are required to attend. Students are not permitted to demonstrate unless they have completed this training.

- Payment for demonstrating is £11 per hour.

PEER MENTORING

The University runs a peer mentoring scheme for new PhD students. Peer mentoring has proven to be successful at Queen’s and has considerable benefits for the mentor as well as for the mentee. Being a mentor can contribute to your personal and professional development and the specialised training, provided by the Graduate School, affords an opportunity to enhance your organisational, communication, and facilitation skills. Taking part provides credits towards the completion of Researcher Plus.

For more information on the peer mentoring scheme, please contact: biosciences-pg@qub.ac.uk.
PROGRESS MONITORING

All postgraduate research students, whether based at Queen's or elsewhere, must undergo progress monitoring as detailed in the table below. All SBIO/IGFS students are assigned a progress monitor ("RSL Panel Member" in QSIS) who serves as one of the independent assessors for each review.

<table>
<thead>
<tr>
<th>Review</th>
<th>Timing of review</th>
<th>Review requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Review</td>
<td>Within three months of first registration (full-time students) and six months of first registration (part-time students).</td>
<td>You must submit a project summary and research plan and attend an interview with an independent panel. You may access the record of the meeting, with assessors’ feedback, in QSIS following approval by the PGR Committee Chair (of which you will receive an automatic email notification).</td>
</tr>
<tr>
<td>Annual Progress Review</td>
<td>Each summer until the viva exam.</td>
<td>You must submit a report on your research and a copy of your training record. It is considered good practice for the report to be processed through Turnitin, the University's originality-checking service, with the help of your supervisor. You must also attend an interview with an independent panel. You may access the record of the meeting, with assessors’ feedback, in QSIS following approval by the PGR Committee Chair (of which you will receive an automatic email notification).</td>
</tr>
<tr>
<td>(including Differentiation)</td>
<td></td>
<td>Please note that part-time PhD students are expected to complete differentiation between 12 and 18 months of first registration.</td>
</tr>
<tr>
<td>Formal meetings with supervisor(s)</td>
<td>Ten times per year for full-time students and six for part-time or Thesis Only students. *Except International students on a Tier 4 visa – see Attendance Monitoring, pg. 19. *There should also be regular informal meetings.</td>
<td>You must discuss the progress of your research plan with your supervisor(s). <strong>A short summary of each meeting must be recorded in QSIS.</strong> For instructions on how to do this: <a href="https://www.qub.ac.uk/directorates/AcademicStudentAffairs/StudentServicesSystems/Qsis/QsisServices/QsisforStudents/QsisforResearchStudents/">https://www.qub.ac.uk/directorates/AcademicStudentAffairs/StudentServicesSystems/Qsis/QsisServices/QsisforStudents/QsisforResearchStudents/</a> Instructions on how to access all records of your progress reviews in QSIS are also available from the link above.</td>
</tr>
</tbody>
</table>
THESIS SUBMISSION AND EXAMINATION

Please note that all full-time PhD students are required to submit their thesis to Student Registry, in the Student Guidance Centre (University Terrace), within three years of first registering or within a maximum of four years. All research students who exceed the normal period of study for their degree programme will be asked to demonstrate that they are on course to submit their thesis within an appropriate timeframe. Students who do not submit within the maximum period of study will be required to produce a concession request for permission to continue, which will be granted only if exceptional circumstances apply. For information on what constitutes the normal period of study for your research degree programme, please refer to section 4. Period of Study of the University’s Study Regulations for Research Degree Programmes:

(http://www.qub.ac.uk/directorates/AcademicStudentAffairs/AcademicAffairs/GeneralRegulations/StudyRegulations/StudyRegulationsforResearchDegreeProgrammes/)

Students must give formal notice of their intention to submit their thesis. You should do this three months before your intended submission date by logging-in to QSIS and navigating to Self Service > Research Activities > Service Requests where you are given the option to produce an Intention to Submit request. Intention to Submit requests must include your thesis title and a planned submission date (DD/MM/YY). Submitted requests must then be processed and approved by the School/Institute.

If you intend to graduate in summer, you are advised to submit initial softbound copies of your thesis in early January (early June for winter graduation). Deadlines for submission of final hardbound copies are available at: https://www.qub.ac.uk/directorates/sgc/srecords/Examinations/Postgraduate-Research/ImportantDeadlines/.

Once your Intention to Submit request has been submitted and approved, your supervisor(s) must nominate both an internal and external examiner for your thesis. These nominated examiners must be approved by the University before you are allowed to submit your thesis.

Information on how your thesis must be presented and submitted is available on the Student Registry Services website at: https://www.qub.ac.uk/directorates/sgc/srecords/Examinations/Postgraduate-Research/ThesisFormat/ and https://www.qub.ac.uk/directorates/sgc/srecords/Examinations/Postgraduate-Research/OnlineForms/.

As part of the examination of your thesis you must attend a viva exam at the University with the internal examiner, external examiner, and an independent convenor. If you are an employee of the University when your examiners are formally nominated or at any time between their nomination and the viva, you will not have an internal examiner but rather two externals. The viva will normally be held approximately two months after the submission of your thesis. Information on viva procedures
and outcomes is available under section 7.7 (The Examinations Process) of the University's Study Regulations for Research Degree Programmes:  
http://www.qub.ac.uk/directorates/AcademicStudentAffairs/AcademicAffairs/GeneralRegulations/StudyRegulations/StudyRegulationsforResearchDegreeProgrammes/  

For answers to frequently asked questions relating to thesis submission and examination, please see:  
https://www.qub.ac.uk/directorates/sgc/srecords/Examinations/Postgraduate-Research/FAQ/  

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**GRADUATION**

When the Student Registry office receives the hardbound copies of your thesis, they will generate a qualification letter which confirms that you have qualified for the degree of Doctor or Master of Philosophy. The Head of Student Registry will also amend your student account in QSIS to show that you have completed all elements of your research programme and are eligible for graduation.

When you receive your qualification letter you will be eligible for graduation. You will receive an email to your Queen’s student email address which will advise you when the registration wizard for graduation will open in QSIS. Instructions on how to complete the registration wizard will be contained in the email.

Further information on graduation is available from the University's website:  
https://www.qub.ac.uk/home/Graduation/  

Following graduation, if you wish to obtain an official copy of your academic transcript, a replacement degree parchment or a letter verifying your education, you may contact Student Registry for assistance:  
http://www.qub.ac.uk/directorates/sgc/srecords/.
ABSENCE

If you require a leave of absence from your studies you should obtain a request form from the School Postgraduate Research Administrator (biosciences-pg@qub.ac.uk). Leaves of absence cannot be recognised unless they are formally requested by the student and pass through the approval process involving the School and Student Registry.

Funded students should refer to their funder’s terms and conditions, or contact the Postgraduate Awards team at graduateschool@qub.ac.uk, to confirm the implications which a leave of absence may have for their funding arrangements. Overseas students should contact International Student Support at iss@qub.ac.uk to check implications for their visa.

If you are unable to come in to work because of illness, you must contact your supervisor or the School/Institute office in the morning of your first day of absence. You are able to self-certify for five working days. If you are absent for longer than five days, a medical certificate is required.

ATTENDANCE MONITORING OF STUDENTS ON A TIER 4 VISA

The UK Visa and Immigration Service (UKVI) requires confirmation that International students are attending the University and are fully engaged with their studies. Postgraduate research students on a Tier 4 visa are required to record in QSIS at least one meeting per month with their supervisors (see Progress Monitoring, page 16).

Failure to record at least one meeting per month will be noted by International Student Support. The International Student Support team is required to report repeated unauthorised absences to the Home Office.

For further information on this, students are advised to contact International Student Support at: iss@qub.ac.uk, or in person at the International Student Support office on the first floor of the Student Guidance Centre.
HOLIDAYS

Full-time research students are entitled to take up to 40 days of annual leave each year (20 days for part-time students) including public holidays and University closure days. In cases where a student is on a leave of absence for part of a year, holiday entitlement is determined on a pro rata basis. All holidays must be agreed with supervisors in advance.

The University’s closure days in the 2019/20 academic year, and later in 2020, are as follows:

- **Christmas/New Year** – Monday 23 December 2019 to Wednesday 1 January 2020 (inclusive)
- **St Patrick’s Day** – Tuesday 17 March 2020
- **Easter** – Friday 10 April to Friday 17 April 2020 (inclusive)
- **May Day** – Friday 8 May 2020
- **July Holidays** – Monday 13 July and Tuesday 14 July 2020
- **Christmas/New Year** – Wednesday 23 December 2020 to Friday 1 January 2021 (inclusive)
POSTGRADUATE STAFF-STUDENT CONSULTATIVE COMMITTEE

The purpose of the Staff-Student Consultative Committee is to ensure that Schools and Institutes receive evaluation and feedback from students on the quality of their academic provision and associated activities, and to provide a mechanism whereby Schools and Institutes can seek the views of students on matters of policy related to course development and review.

The Postgraduate Staff-Student Consultative Committee in Biological Sciences/IGFS is open to both postgraduate taught and research students. Student membership of the Committee is determined through a process administered by the Students’ Union’s Student Voice team (see: http://www.qubsu.org/change/BecomeaStudentRep/BecomeaCourseRep/)

The Committee normally meets on three or four occasions during the academic year.

Student members are expected to represent their peers and to raise any questions, concerns or suggestions that they may have in relation to their degree programme or general experience at the University. A Student Chair is elected from student members to represent Biological Sciences/IGFS postgraduate students at the Postgraduate Forum, a University-wide Staff-Student Consultative Committee that is chaired by the Pro-Vice Chancellor for Research and Enterprise. Postgraduate research students on the Committee are also invited to attend meetings of the Biological Sciences/IGFS Postgraduate Research Committee, which deals with a range of issues relating to postgraduate research.

Membership of the Staff-Student Consultative Committee also consists of academic staff representatives. The Staff Chair is Dr Chen Situ. If you are interested in learning more about the Postgraduate Staff-Student Consultative Committee, please contact Dr Situ at: c.situ@qub.ac.uk.

COMMUNICATION TO STUDENTS

Please note that all email communication from Biological Sciences/IGFS and from other parts of the University will always be sent to your Queen’s email account. This applies even to students based externally who may have email accounts linked to the external host (e.g. AFBI, Teagasc). You must therefore ensure that you check your Queen’s email regularly so as not to miss important messages.
HOUSE RULES (INCLUDING HEALTH AND SAFETY)

- The printers in the School/Institute offices are only to be used by postgraduate research students in exceptional circumstances. Printers are available throughout the University in designated student areas, e.g. the McClay Library.

- Lab coats should only be worn while in the laboratory.

- Normal working hours are Monday to Friday, 9 am to 5 pm. In exceptional circumstances you may be required to work later in the evening, or at weekends. In this case you must complete an Out-of-Hours form, have it signed by your supervisor, and ensure that you have the completed form in your possession when on the premises. Security (x5099) must be informed when you enter and leave the building. The emergency number for security is x2222.

- A Health and Safety training session will be scheduled for October. In 2019, this will take place on Tuesday 8 October at 3 pm in Seminar Room 1 of the Biological Sciences building. The session is compulsory for all postgraduate students. You will also receive a Health and Safety booklet which you are required to read.

- Prior to undertaking any lab work, COSHH forms must be completed and signed by both the academic supervisor and School Safety Officer, Dr Rosaleen Hynes (biolsci.safety@qub.ac.uk).

- Only basic stationery will be provided to postgraduate research students at induction. Students must provide their own additional items.

- Kitchen, fridge and microwave facilities are available to postgraduate research students. Please do not use the staff kitchen.

- All postgraduate research students are expected to tidy up their own dishes. This is not the responsibility of office staff. You must also supply your own tea and coffee.
USE OF SCHOOL VEHICLES

School vehicles are available for use by staff or students to support education or research activities. The key contact is the School's Chief Technical Officer, Ms Katrina O'Connor (k.oconnor@qub.ac.uk).

- All users must provide driving licence details to the Chief Technical Officer or their appointed representative for insurance purposes before they are authorised to drive any of the School vehicles. You must notify the School of any changes to your driving licence as soon as possible as failure to do so may invalidate any insurance cover.

- School vehicles can be booked through the School Office.

- All users must recognise that we have a duty of care to our students. Therefore, vehicles should not be left back for use with little or no fuel on a regular basis. If you put fuel in your vehicle keep your receipt; this can be claimed back for eligible journeys. On completion of your journey you must note your mileage in the mileage book stored in the vehicle.

- Fuel should normally be purchased from the BP Garage, 70-74 Malone Road, Belfast, where the School has an account. If fuel is required offsite, please keep your receipt and this can be claimed back for eligible journeys.

- All users must recognise that the vehicles are for use by staff and students and so should not be returned in an unusable or unfit state. The vehicle user is responsible for taking any rubbish with them and there is to be no smoking in any of the vehicles.

- All users must not bring the School/University into disrepute through their use of the School vehicles. This includes leaving the scene of an accident or incident where another vehicle has been damaged, or breaking any other law while in charge of the vehicle. Any and all damage must be reported immediately to the Chief Technical Officer or their nominated representative.

- If research is to be carried out over weekends or the holiday period, this must be authorised in advance by the Chief Technical Officer or their nominated representative. If this happens on a regular basis, justification must be supplied to the Head of School.

ORDERING CONSUMABLES AND BOOKING TRAVEL

An Order Requisition Form which is available from the School Office must be completed when ordering consumables. The form should be signed by the student’s supervisor.

The form must be completed with the product code and description of the item being requested, project code, and the supplier’s name and address. Completed forms must be brought in person to the School Office or emailed to sbs-purchasing@qub.ac.uk.

If items are being ordered using purchase card then a link to the webpage would be extremely helpful.

When the items arrive the student will be contacted by School Office staff and asked to call in and collect.

If travel is required for a conference or to carry out fieldwork, an email from the student with backup from their supervisor should be emailed to sbs-purchasing@qub.ac.uk.
ATHENA SWAN

The School/Institute is committed to the Athena SWAN Charter and its underpinning beliefs. To keep up with all recent developments with SWAN (Gender Equality to Enable Scientific Excellence), and to see some of the discussions that have arisen, please visit the School website: https://www.qub.ac.uk/schools/SchoolofBiologicalSciences/Connect/AthenaSWAN/

Suggestions or questions relating to SWAN may be directed to the School of Biological Sciences Self-Assessment Team (see website link above).

WEBSITES AND SOCIAL MEDIA

School of Biological Sciences
https://www.qub.ac.uk/schools/SchoolofBiologicalSciences/
https://twitter.com/QUBbioscience/
https://en-gb.facebook.com/QUBBiologicalSciences/

Institute for Global Food Security
https://www.qub.ac.uk/Research/GRI/TheInstituteforGlobalFoodSecurity/
https://twitter.com/QUBIGFS/
https://en-gb.facebook.com/QUBIGFS/
RANKED IN THE TOP 1% OF UNIVERSITIES IN THE WORLD

(QS World University Rankings 2018/
Webometrics.info)