ROYAL HOLLOWAY
University of London

PROGRAMME SPECIFICATION

This document describes the **MSc by research in Biological Sciences**. This specification is valid for new entrants from **September 2016**.

The aims of this degree programme are:

- to provide training in the key generic skills required to be a scientific researcher;
- to provide advanced training in a specialised branch of biological sciences research;
- to ensure familiarity with a range of transferable, advanced research skills;
- to provide practice in communicating results of research both by oral presentation and by preparation of a Master thesis.

The programme is delivered over one year (52 weeks) of full-time study or two years of part-time study (104 weeks). It provides in-depth research training and practice in the Biological Sciences. The degree was initiated in 2000 as part of the School of Biological Sciences' development of a 1+3 years research training programme (one year Master's leading to three years PhD). Students receive training in generic scientific and specialised discipline-specific research skills. Development of a single research project provides students with much greater depth and focus of knowledge and skills than is found in comparable Masters by Research, which usually involves three small projects. The programme contains a teaching component that has to be passed (pass at Masters level is 50%) and attendance will be recorded. A minimum of 80% attendance will be required.

This document provides a summary of the main features of the programme, and of the outcomes which a student might reasonably be expected to achieve if full advantage is taken of the learning opportunities provided. Further information is contained in the College prospectus, the College Regulations and in various handbooks issued to students upon arrival. Whilst Royal Holloway keeps all its information for prospective applicants and students under review, programmes and the availability of individual courses are necessarily subject to change at any time, and prospective applicants are therefore advised to seek confirmation of any factors which might affect their decision to follow a specific programme. In turn, Royal Holloway will inform applicants and students as soon as is practicable of any substantial changes which might affect their studies.

Further information

Learning Outcomes

The programme complies fully with Descriptors for a Masters level qualification set out by the Quality Assurance Agency for Higher Education in England and Wales (QAA) as all of its learning outcomes are at Masters (M) level. In general terms the programme provides opportunities for students to develop and demonstrate the following learning outcomes:

Knowledge and understanding

- in-depth and critical knowledge of a specialised field
- knowledge and understanding of research methodologies relevant to long-term, advanced scientific research
- knowledge and understanding of relevant information technology, and its application to the research project
- advanced understanding of the key features of a good scientific paper, the peer review process and how to prepare a paper for publication
- advanced understanding of the key features of a high quality grant proposal
- understanding of safety and good practice in laboratory and field, and the ability to complete a risk assessment
- ability to use citations appropriately

Skills and other attributes

- advanced discipline-specific research skills in a branch of the biological sciences
- independently planning and executing a research project to time
- oral communication, including presentations, and public speaking
- written communication, including the ability to author scientific posters and produce research
- papers with a logical structure and in comprehensible and unambiguous English
- authoring of simple web pages
- formulation of clear testable hypotheses and development of valid experimental designs
- acquisition, analysis and interpretation of data
- presentation of graphical data in a clear and appropriate format
- information synthesis, for presentation or written report
- time management team-work
- self-motivation, flexibility, adaptability
- transferable skills

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Teaching, learning and assessment

Teaching and learning is mainly by tutorials, completion of coursework and private study for the taught modules; by preparation and participation in oral presentations, involving discussion and feedback from the supervisor and research group; and for the project by independent research and private study, supported by research supervision.

Students receive regular, scheduled, feedback on: their performance in taught modules; their project plan and draft introduction (autumn term); draft materials and methods write up (spring term); preparatory oral presentation (spring term); oral presentation (summer term); and draft project write up (summer term). Completion of tasks is monitored centrally to ensure students experiencing difficulty can be identified and provided with appropriate support.

Assessment is by coursework on several subjects of the taught component (including an oral presentation) and a research project written up in the form of a thesis. Full details of the assessments for individual subjects can be obtained from the School.

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Details of the programme structure(s)
The programme comprises two major elements, as follows:

- **Element 1:** A taught non-credit bearing element providing training in **Generic research skills** consisting of several subjects split in three themes: research methodology, career development and presenting your research. 10 core subjects will be assessed to provide evaluation of training in generic scientific research skills and discipline-specific, but transferable, advanced research skills. Additional optional subjects are provided, although choice of options may differ slightly from year to year. Choice of options is undertaken in conjunction with the project supervisor to ensure coherence to an individual student's programme. All core subjects must be taken as well as sufficient optional subjects so that 30 subjects are taken in total. A pass in all assessed subjects will be required for the award of the degree.

  For part time students attendance at taught sessions and assignment hand in dates will be spread across the two year period as agreed between the student, supervisor and course coordinator. This will be arranged as much as possible to fit around the student's commitments.

  Generic research skills:
  Research methodology
  Career development
  Presenting your research
  Optional IT skills booked via IT training (2 to be chosen)

- **Element 2** (180 credits): Your main research project that will be assessed by a written thesis of 20.000 words. Details on the thesis write up will be provided in the student handbook

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Progression and award requirements

Please note that if you hold a Tier 4 (General) Student Visa and you choose to leave (or are required to leave because of non-progression) or complete early (before the course end date stated on your CAS), then this will be reported to UKVI.

To pass the programme a student must pass the taught element (Element 1). Students cannot normally resit this component of the programme.
If the research project (Element 2) is considered by the examiners to be of sufficient merit but minor corrections are required, the examiners can recommend that the candidate be awarded the Master of Science by Research degree, subject to completion of minor corrections to the dissertation which must be submitted within six weeks of the students being formally notified of the outcome.

The Master by Research is awarded on a pass/fail basis only.

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Student support and guidance
- Personal Supervisor: All students are allocated a supervisor, with whom they meet regularly to discuss all matters relating to their course and for pastoral support.
- Personal Adviser: Students also have an advisor, who deputises for the supervisor in his/her absence, and who can provide additional support and guidance. Students are free to meet their advisors as and when necessary.
- Induction sessions and termly meetings with the Programme Director.
- Membership of a research group.
- Representation on the Postgraduate Committee.
- All staff available and accessible through an open-door policy or by operating an office hours system.
- Student handbook.
- Extensive supporting materials and learning resources in College libraries and computer centre.
- Dedicated School teaching laboratories
- A School of Biological Sciences Special Needs Officer.

- College Careers Service and School Careers and Career Service Liaison Officer, supplemented by a dedicated careers area housing PC support within the School.
- Access to all College and University support services, including Student Counselling Service, Health Centre and the Dyslexia and Disabilities Services for students with special needs.

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Admission requirements
For details of admissions requirements please refer to the Course Finder.

Possession of an appropriate honours degree (2:ii or higher) or an equivalent qualification from overseas is the normal entry requirement. Some supervisors may require a higher qualification. Applications from candidates who hold other qualifications or who have relevant work experience will also be considered. Students whose first language is not English may also be asked for a qualification in English Language at an appropriate level. For further details please refer to the Prospective Students web page. It may also be helpful to contact the Admissions Office for specific guidance on the entrance requirements for particular programmes.

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Further learning and career opportunities

The programme prepares students for future careers in Biological Sciences research, including doctoral degrees, and related areas of employment. Students are provided with training in a range of subject specific and transferable skills.

Information on these opportunities is provided by talks on careers and higher degree opportunities, organised by the College Careers Service. An online careers information centre for all students in the School of Biological Sciences is based within the Bourne building. For more details on further learning and career opportunities please refer to the Careers Service.

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Indicators of quality and standards
Royal Holloway's position as one of the UK's leading research-intensive institutions was confirmed by the results of the most recent Research Excellence Framework (REF 2014) conducted by the Higher Education Funding Council (HEFCE). The scoring system for the REF 2014 measures research quality in four categories, with the top score of 4* indicating quality that is world-leading and of the highest standards in terms of originality, significance and rigour and 3* indicating research that is internationally excellent. 81% of the College's research profile was deemed to be within the 4* or 3* categories, an increase of over 20% since 2008. This results for the quality of our research outputs placed Royal Holloway 15th in the UK based on an overall Grade Point Average (GPA) score and 20th in the UK for 4* and 3* research. 76% of research in the School of Biological Sciences was judged to be internationally excellent or world-leading. Furthermore, the School is a member of both BBSRC and NERC Doctoral Training Partnerships. Membership of both shows the quality and strength of our research and means that the School has access to funds for full time PhD studentships every year.

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List of postgraduate programmes
The programme is taught largely by staff at Royal Holloway, University of London and leads to an award of the University of London. Programmes in Biological Sciences are not subject to accreditation by a professional body. The Banner programme code is given in parentheses.

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