

MSc Biomedicine

Programme Specification

Primary Purpose

Course management and quality assurance.

Secondary Purpose

Detailed information for students, staff and employers. Current students should refer to the related Course Handbook for further detail.

Disclaimer

The University of Portsmouth has checked the information given in this Programme Specification. We will endeavour to deliver the course in keeping with this Programme Specification; however, changes may sometimes be required arising from annual monitoring, student feedback, review and update of units and courses. Where this activity leads to significant changes to units and courses, there will be prior consultation of students and others, wherever possible, and the University will take all reasonable steps to minimize disruption to students. It is also possible that the University may not be able to offer a unit or course for reasons outside of its control, for example; the absence of a member of staff or low student registration numbers. Where this is the case, the University will endeavour to inform applicants and students as soon as possible. Where appropriate, the University will facilitate the transfer of affected students to another suitable course.

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Course Details

1. Named Awards

MSc Biomedicine

2. Course Code (and UCAS Code if applicable)

C2091F

3. Awarding Body

University of Portsmouth

4. Teaching Institution

University of Portsmouth

5. Accrediting Body

Not applicable

6. QAA Benchmark Groups

There are no specific benchmarks for the course.

7. Document Control Information

V6, July 2017

8. Effective Session

2017-18

9. Author

Dr Sarah Fouch

10. Faculty

Science

11. Department

Pharmacy & Biomedical Science

Curriculum

12. Educational Aims

- To provide a challenging learning environment informed by current research, clinical practice and state-of-the-art techniques.
- To develop students' critical, analytical and interpretation skills necessary for a career in science.
- Develop capacity for independent and creative scientific endeavour.
- Develop an in depth understanding of the molecular basis of disease and its importance in patient diagnosis and treatment.

- Develop a scientific understanding of the causes, diagnosis and treatment of human disorders.
- To produce graduates with the ability to work as an independent scientist.

13. Reference Points

This course is intended to provide students with an opportunity to acquire a deeper understanding of recent advances in pathology and molecular biology. The Course will also prepare students for independent research activities where they will be required to conceptualise, design and implement projects and generate significant new knowledge and understanding. This will be achieved by developing the students understanding of a systematic approach to tackling complex issues through the application of their knowledge and problem solving techniques. To facilitate this process the scholarship and expertise of members of academic staff will be utilised to provide a current research informed teaching environment. This will ensure that the students gain a qualification which is translatable to level 7 of the national qualification framework (NQF). The course will also develop employment skills such as sound ethical judgement, personal responsibility and initiative.

This curriculum design is in line with the requirements for Masters education laid out in the QAA Framework for Higher Education in England, Wales and Northern Ireland (QAA, 2015). The curriculum will be developed using the guidelines cited within the University Curriculum Framework to ensure commonality with other postgraduate taught programmes and allow comparison with European degrees consistent with the Bologna declaration. The requirements of this framework include specific requirements such as research training and key skills provision both of which will be given high priority and integrated into the curriculum.

- University of Portsmouth Curriculum Framework Document.
- The scholarship and research expertise of academic members of staff.
- QAA Code of Practice for the Assurance of Academic Quality and Standards in Higher Education
- Framework for Higher Education Qualifications (FHEQ)
- National Qualifications Framework
- School of Pharmacy and Biomedical Sciences Learning, Teaching, Assessment and Student Support Strategic Plan

14. General Learning Outcomes

Level 7

Master's degrees are awarded to students who have demonstrated:

- a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study or area of professional practice
- a comprehensive understanding of techniques applicable to their own research or advanced scholarship
- originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline
- conceptual understanding that enables the student:
 - to evaluate critically current research and advanced scholarship in the discipline
 - to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses

Typically, holders of the qualification will be able to:

- deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences
- demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level

- continue to advance their knowledge and understanding, and to develop new skills to a high level

And holders will have:

- the qualities and transferable skills necessary for employment requiring:
 - the exercise of initiative and personal responsibility
 - decision-making in complex and unpredictable situations
- the independent learning ability required for continuing professional development

15. Learning Outcomes

A. Knowledge and Understanding of:

- A.1 The philosophical and ethical basis of Biomedicine
- A.2 The molecular basis, pathophysiology, detection and treatment of a number of common disease states
- A.3 The social and physiological aspects of health
- A.4 Research methodology and selected advanced scientific techniques.

B. Cognitive (Intellectual or Thinking) Skills, able to:

- B.1 Critically evaluate data, literature and experimental methods
- B.2 Synthesize and plan a novel piece of research
- B.3 Appreciate the roles of different disciplines in the management of disease
- B.4 Critically discuss the regulation of biomedical research

C. Practical (Professional or Subject) Skills, able to:

- C.1 Apply critical analysis skills to novel clinical situations
- C.2 Interpret complex clinical, experimental data
- C.3 Evaluate and implement an M level research proposal
- C.4 Perform a variety of research methods and synthesize these to answer a research question

D. Transferable (Graduate and Employability) Skills, able to:

- D.1 Develop independent thought and ability to solve complex problems
- D.2 Reflect on personal skills and make improvements where needed
- D.3 Successfully communicate scientific information in both written and oral forms
- D.4 Manage time efficiently
- D.5 Work effectively as a member of a team

16. Learning and Teaching Strategies and Methods

Students will develop knowledge and understanding of the philosophical and ethical basis of research in Biomedicine and the social and physiological aspects of health by means of lectures, directed study, group work and seminars which will include problem-based learning (1-4). Common disease states will be introduced in lectures and as topics for directed study supported by online resources (2). Small group tutorials, formative assessment and online support via the VLE will assist in the achievement of these outcomes.

Students will develop cognitive skills related to all of the learning outcomes by lecturer facilitated and self-directed study (1-4). Facilitated small group work involving case studies will assist in the development of critical analysis and in the appreciation of the multidisciplinary nature of the treatment of disease (1, 3). The development of a project proposal and workshops will allow

students to plan and evaluate the regulation of biomedical research (2, 4). Small group tutorials, formative assessment and online support via Moodle will assist in the achievement of these outcomes.

Practical laboratory classes, demonstrations and group workshops will allow students to apply critical analysis skills, perform a variety of methods and interpret complex data (1, 2, 4). Successful completion of the project unit will lead to achievement of all learning outcomes (1-4).

Transferable skills underpin each unit of the course and students will be encouraged to reflect on their individual skills and progress during personal tutorials facilitated by a structured personal development plan scheme (1, 2, 4). Summative and formative assessments will involve poster and oral presentations with question and answer sessions and problem based learning and discussions will facilitate the development of independent thought and communication skills (1-3). Group work required in several of the units will improve the students' ability to work as an effective member of a team and solve complex problems (1, 5).

17. Assessment Strategy

Examinations and course work will be used to assess knowledge and understanding attained through taught lectures, seminars and covered by directed study and group work (1-3). The project proposal and dissertation will be used to assess the student's attainment of these learning outcomes (1-4).

Cognitive skills will be assessed through examination (1, 3), presentations (1, 2) and completion of the project proposal and dissertation (1, 2, 4). Completion of case study based reports and portfolios will assess the students' appreciation of the multidisciplinary nature of the treatment of disease and the regulation of biomedical research (3, 4). Online discussions via the VLE, will also be used to assess the students' critical evaluation skills (1).

The students' practical skills will be assessed by observation of their conduct in laboratory classes and project work and by submission of practical reports and dissertation (2-4). Their ability to apply critical analysis and interpretation will be assessed by the completion of case studies and a portfolio (1, 2, 4).

Throughout the course, the students' transferable skills are assessed by means of posters, oral presentations and discussions (3, 4). In many of these tasks students are required to work as a team and manage their own and others time efficiently (1, 5). Self-reflection is a common theme in various formative assessments, but the skill is formally assessed by the completion of a personal development portfolio (2).

18. Course Structure, Progression and Award Requirements

See [Unit Web Search](#)¹ for full details on the course structure and units

The MSc Biomedicine is a one year full-time postgraduate degree with two core units comprising 90 credits, a choice of one option from three offered, rated at 30 credits, as well as a 60 credit rated project.

Successful completion of these units will lead to the achievement of 180 M level credits and the award of a Master of Science degree. The project will commonly be conducted within the Faculty, with the possibility of input from designated research laboratories by prior arrangement and where quality of research training can be assured. Links with employers are maintained by the long-standing association between the School of Pharmacy and Biomedical Sciences and regional hospitals and various hospital staff teach on the course.

In addition to the award of MSc, the following exit awards are available. (Standard University rules apply. The regulations must be consulted for a full description of exit awards):

- Postgraduate Certificate. This shall be awarded to a graduate who has successfully completed at least 60 credits.

¹ www.port.ac.uk/unitwebsearch

- Postgraduate Diploma. This shall be awarded to a graduate who has successfully completed at least 120 credits.

19. Employability Statement

MSc Biomedicine is oriented to enhance student's understanding of molecular science and develop analytical, numerate, laboratory and research skills. These have been known to enable our students to secure research positions especially success in securing PhD studentships. The Drug development, Clinical trials and Oncology unit will allow students to gain an understanding of drug discovery and aspects of clinical trials, opening up prospects for additional avenues of employment in the pharmaceutical and related industries. The Clinical Physiology unit will provide students with an understanding of public health and knowledge of a range of clinical tests which opens up opportunities for employment in the area of physiological sciences. .

Students will be given lectures on career opportunities and are directed by their personal tutor and course leader to the types of jobs that they can apply. Personal development planning (PDP) sessions with their personal tutors will help students to identify their strengths and weaknesses and put in place strategies to improve their academic and transferable skills.

Course Management

20. Support for Student Learning

- The Course is managed by a Course Leader.
- An extensive induction programme introduces the student to the University and their course.
- Each student has a personal tutor, responsible for pastoral support and guidance.
- University support services include - careers, financial advice, housing, counselling etc.
- A dedicated Student Services Centre.
- Excellent library facilities.
- E-learning support will be provided in the form of unit and course specific web-based VLE sites, allowing students access to key resources on and off site.
- The University of Portsmouth has consistently been awarded an excellent rating for student support and guidance in a number of Quality Assurance Agency inspections.
- Student course and unit handbooks provide information about the course structure and University regulations etc.
- The Academic Skills Unit (ASK).
- The Additional Support and Disability Advice Centre (ASDAC).
- English for Academic purposes (EAP) for International students.
- Key Skills opportunities are incorporated into all units.
- Written feedback is provided for all assessments.
- Personal Development Planning (PDP) for all awards.
- The Faculty has excellent Laboratory and Teaching facilities supported by designated technical staff.

21. Admissions Criteria

A. Academic Admissions Criteria

The admissions requirement for the MSc Biomedicine is an upper second class honours degree or equivalent in a Biological Science discipline. Professional experience and qualifications may be taken into consideration for students not meeting this requirement. If appropriate, prior learning may be assessed and accredited.

Students must also possess English as a first language or have a minimum IELTS score of 6.5 with an even profile.

B. Disability

The University makes no distinction in its admissions policy with regard to disability and will endeavour to make all reasonable adjustments in order to make it possible for students to study at Portsmouth on a course of their choice.

22. Evaluation and Enhancement of Standards and Quality in Learning and Teaching

A. Mechanisms for Review and Evaluation

- Course Leader's Annual Standards and Quality Evaluative Review.
- Head of Department's Annual Standards and Quality Evaluative Review.
- Unit and Course Level student feedback considered at Board of Studies.
- Unit Assessment Board consideration of student performance for each programme.
- Annual Standards and Quality Reports to Board of Studies, including consideration of Subject and Award External Examiner Reports.
- Periodic Programme Review.
- Student Representatives and Student/Staff Consultative Committees.
- National Student Survey.
- Staff Performance and Development Review.
- Peer Review and Development Framework.
- Faculty Learning and Teaching Committee.

B. Responsibilities for Monitoring and Evaluation

- Unit Co-ordinators for unit content and delivery.
- Course Leader for day-to-day running of course.
- Board of Studies with overall responsibilities for operation and content of course.
- Head of Department.
- Associate Dean (Academic).
- Associate Dean (Students).
- Quality Assurance Committee.
- Unit, Award and Progression Board of Examiners.

C. Mechanisms for Gaining Student Feedback

- Student Representation on Board of Studies.
- Student Staff Consultative Committees.
- Unit and Course level student feedback questionnaires.
- University participates in external student surveys, e.g., , Postgraduate Research Experience Survey (PRES) and International Student Barometer (ISB).

D. Staff Development Priorities

- Academic staff undertake activities related to research, scholarship, teaching and learning, and student support and guidance.
- Annual staff performance and development reviews match development to needs.
- Managers undertake a variety of management development programmes.
- New academic staff are required to undertake the APEX Fellowship Pathway to Descriptor 2 of the UK Professional Standards Framework for teaching and supporting learning in Higher Education.

- All academic staff are encouraged to seek Higher Education Academy membership.
- Academic staff new to teaching are required to undertake Initial Professional Development Programme (iPROF).
- Support Staff are encouraged to attend short courses in areas such as minute taking, and specific IT packages.

23. Assessment Regulations

The current University of Portsmouth academic regulations will apply to this programme (see [Assessment and Regulations²](#)).

24. Role of Externals

Subject External Examiners who will:

- Oversee unit assessment and usually attend Unit Assessment Boards
- Review unit assessment strategy
- Sample assessment artefacts
- Present report to Unit Assessment Boards

Award External Examiners (usually also a Subject External Examiner) who will:

- Oversee and attend Award/Progression Boards
- Scrutinise and endorse the outcomes of assessment
- Ensure that the standard of the award is maintained at a level comparable with that of similar awards elsewhere in the United Kingdom

25. Indicators of Standards and Quality

A. Professional Accreditation/Recognition

N/A

B. Periodic Programme Review (or equivalent)

A Periodic Programme Review was carried out on the MSc Biomedicine course in February 2015 and confirmed that the course was fit for purpose.

C. Quality Assurance Agency

QAA Higher Education Review, March 2015, judgements about standards and quality meet UK expectations (*for full report see [Higher Education Review of the University of Portsmouth, March 2015³](#)*).

D. Others

None.

26. Further Information

Further information may be found in:

- Student Handbook
- University of Portsmouth Curriculum Framework Document
- University of Portsmouth Prospectus

² www.port.ac.uk/departments/services/academicregistry/qualitymanagementdivision/assessmentandregulations/

³ www.qaa.ac.uk/en/ReviewsAndReports/Documents/University%20of%20Portsmouth/University-of-Portsmouth-HER-15.pdf

- [University of Portsmouth](#)⁴ and [School/Department](#)⁵ websites

⁴ www.port.ac.uk/

⁵ <http://www.port.ac.uk/school-of-pharmacy-and-biomedical-sciences/>