



UNIVERSITY OF  
PORTSMOUTH

## COURSE SPECIFICATION

### *MSc Biotechnology*

**Academic Standards, Quality and Partnerships  
Department of Student and Academic Administration**

**March 2018**

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# COURSE SPECIFICATION

Please refer to the [Course Specification Guidance Notes](#) for guidance on completing this document.

<b>Course Title</b>	<b><i>MSc Biotechnology</i></b>
Final Award	<i>MSc</i>
Exit Awards	
Course Code / UCAS code (if applicable)	C2666F/F
Mode of study	<i>Full time</i>
Mode of delivery	<i>Campus</i>
Normal length of course	<i>1 year</i>
Cohort(s) to which this course specification applies	<i>from September 2019 intake onwards</i>
Awarding Body	<i>University of Portsmouth</i>
Teaching Institution	<i>University of Portsmouth</i>
Faculty	<i>Science Faculty</i>
School/Department/Subject Group	<i>School of Biological Sciences</i>
School/Department/Subject Group webpage	<i><a href="http://www.port.ac.uk/school-of-biological-sciences/">http://www.port.ac.uk/school-of-biological-sciences/</a></i>
Course webpage including entry criteria	<i><a href="http://www.port.ac.uk/courses/biological-sciences/msc-biotechnology">http://</a> <a href="http://www.port.ac.uk/courses/biological-sciences/msc-biotechnology">http://www.port.ac.uk/courses/biological-sciences/msc-biotechnology</a></i>
Professional and/or Statutory Regulatory Body accreditations	
<a href="#">Quality Assurance Agency Framework for Higher Education Qualifications (FHEQ) Level</a>	<i>level 7</i>

This course specification provides a summary of the main features of the course, identifies the aims and learning outcomes of the course, the teaching, learning and assessment methods used by teaching staff, and the reference points used to inform the curriculum.

This information is therefore useful to potential students to help them choose the right course of study, to current students on the course and to staff teaching and administering the course.

Further detailed information on the individual modules within the course may be found in the relevant module descriptors and the Course Handbook provided to students on enrolment.

Please refer to the [Module Web Search](#) for further information on the course structure and modules.

## Educational aims of the course

The [Course Specification Guidance Notes](#) include advice on what to include in this section.

- To provide a challenging learning environment informed by current research, industrial applications and state-of-the-art techniques in biotechnology
- 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 application of molecular and microbiological techniques and their potential commercial value, for example, in the extraction of commercially relevant compounds from microbes to the engineering and optimising proteins for industrial applications
- Develop a scientific understanding of how human diseases can be experimentally recreated in model systems using the latest gene editing technologies.
- To produce graduates with the ability to work as independent scientists in a laboratory setting, through extensive practical and project work

## Course Learning Outcomes and Learning, Teaching and Assessment Strategies

The [Quality Assurance Agency for Higher Education \(QAA\)](#) sets out a national framework of qualification levels, and the associated standards of achievement are found in their [Framework for Higher Education Qualifications](#) document.

The Course Learning Outcomes for this course are outlined in the tables below.

### A. Knowledge and understanding of:

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
A1	The basis of biological disciplines and their applications to biotechnology and the current state of research and how it leads to future biotechnological developments.	Lectures, workshops, laboratory work, guided independent study	Essays, reports, workshop
A2	Ethics, current legislation and practical experience of using model systems to study diseases.	Laboratory work, workshops	Essays, Lab reports,
A3	The application of molecular techniques in gene editing, sequence analysis, cloning and protein engineering in the production of reagents and in furthering our understanding of disease processes	Workshops, Laboratory work	Essays, lab reports, data handling questions,
A4	Research methodology and selected advanced scientific techniques through individual, original research projects	Lectures Workshops, tutorials, guided independent study	Essays, project reports
A5	The process and pitfalls of commercializing biological products and technologies.	Lectures, guided independent study	Essays

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
B1	Critically evaluate data, literature and experimental methods	Tutorials, workshops, project supervision guides independent learning	Essays, lab reports, project presentations
B2	Appreciate the roles of different disciplines in biotechnological applications	Lectures, workshops,	Essays, lab reports, project report
B3	Synthesize and plan a novel piece of research	Lectures, project supervision	project report
B4	Apply conceptual and practical skills to define, analyse and solve problems	Practical classes, Project work, workshops	Reports, project report

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
C1	Apply critical analysis skills to complex biological systems and problems	Workshop, project supervision	Lab/computer workshop reports, project
C2	Interpret and evaluate complex information and/or experimental data	Laboratory work, project supervision	Lab/computer reports
C3	Implement and evaluate an M level research proposal	Lectures project supervision	project proposal and report
C4	Perform a variety of research methods and synthesize these to answer a research question	Lectures project supervision	Lab reports, project report

**D. Transferrable (Graduate and Employability) skills, able to:**

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
D1	Develop independent thought and ability to solve complex problems for the target audience	Workshops Project supervision	Project report presentations,
D2	Reflect on personal skills and make improvements where needed	Project supervision	Project report
D3	Successfully communicate scientific information in both written and oral forms.	Workshops, project supervision guided	Essays, Lab/reports

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
		independent learning	
D4	Manage time efficiently	project supervision	Project report, presentation
D5	Work effectively as a member of a team	group work, workshops, project	workshop reports, Project Presentation, Group presentations

## Academic Regulations

The current University of Portsmouth [Academic Regulations](#) will apply to this course.

## Support for Student Learning

The University of Portsmouth provides a comprehensive range of support services for students throughout their course, details of which are available at the [MyPort](#) student portal.

In addition to these University support services this course also provided an extensive induction programme that introduces the students to the University and the course. The Course is managed as part of the Biological Sciences MSc programme by a team comprising the Head of School, Associate Head (Learning and Teaching) and the Course leader. All modules are supported by their own Moodle sites.

## Evaluation and Enhancement of Standards and Quality in Learning and Teaching

The University of Portsmouth undertakes comprehensive monitoring, review and evaluation of courses within clearly assigned staff responsibilities. Student feedback is a key feature in these evaluations, as represented in our [Policy for Listening to and Responding to the Student Voice](#) where you can also find further information.

## Reference Points

The course and outcomes have been developed taking account of:

- [University of Portsmouth Curriculum Framework Specification](#)
- [University of Portsmouth Education Strategy 2016 - 2020](#)
- [University of Portsmouth Code of Practice for Work-based and Placement Learning](#)
- [Quality Assurance Agency UK Quality Code for Higher Education](#)
- [Quality Assurance Agency Qualification Characteristic Statements](#)
- [Quality Assurance Agency Subject Benchmark Statement](#) for Biosciences
- [Quality Assurance Agency Framework for Higher Education Qualifications](#)
- Vocational and professional experience, scholarship and research expertise of the University of Portsmouth's academic members of staff
- National Occupational Standards

## Disclaimer

The University of Portsmouth has checked the information provided in this Course Specification and will endeavour to deliver this course in keeping with this Course Specification. However, changes to the course may sometimes be required arising from annual monitoring, student feedback, and the review and update of modules and courses.

Where this activity leads to significant changes to modules and courses there will be prior consultation with students and others, wherever possible, and the University of Portsmouth will take all reasonable steps to minimise disruption to students.

It is also possible that the University of Portsmouth may not be able to offer a module or course for reasons outside of its control, for example, due to the absence of a member of staff or low student registration numbers. Where this is the case, the University of Portsmouth will endeavour to inform applicants and students as soon as possible, and where appropriate, will facilitate the transfer of affected students to another suitable course.

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