

BSc (Hons) Pharmaceutical Science (top up)

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

BSc (Honours) Pharmaceutical Science

2. Course Code (and UCAS Code if applicable)

C2655F (F151)

3. Awarding Body

University of Portsmouth

4. Teaching Institution

University of Portsmouth

5. Accrediting Body

None

6. QAA Benchmark Groups

Chemistry

7. Document Control Information

Version 2, September 2017

8. Effective Session

2017/2018

9. Author

Dr Karen E Ball

10. Faculty

Science

11. Department

School of Pharmacy and Biomedical Sciences

Curriculum

12. Educational Aims

- Provide students with the opportunity to develop a breadth of understanding of the essential facts, concepts, principles and theories relating to the formulation, analysis and development of products for the pharmaceutical and healthcare industries.
- Develop students' critical, analytical, practical, numerical, research and presentation skills.
- Prepare students for employment, postgraduate study and career development.
- Instil the skills necessary for life-long independent learning and acquisition of knowledge and to engender an awareness of the needs for these skills.

13. Reference Points

Reference points include:

- University of Portsmouth Curriculum Framework Document The UK Quality Code for Higher Education
- The Framework for Higher Education Qualifications of UK Degree-Awarding Bodies (Qualification Frameworks)
- Higher Education Credit Framework for England
- The QAA Benchmark Statement of Standards for Chemistry (SBSCChem).

14. General Learning Outcomes

Level 6

Bachelor's degrees/Bachelor's degrees with honours are awarded to students who have demonstrated:

- a systematic understanding of key aspects of their field of study, including acquisition of coherent and detailed knowledge, at least some of which is at, or informed by, the forefront of defined aspects of a discipline
- an ability to deploy accurately established techniques of analysis and enquiry within a discipline
- conceptual understanding that enables the student:
 - to devise and sustain arguments, and/or to solve problems, using ideas and techniques, some of which are at the forefront of a discipline
 - to describe and comment upon particular aspects of current research, or equivalent advanced scholarship, in the discipline
- an appreciation of the uncertainty, ambiguity and limits of knowledge
- the ability to manage their own learning, and to make use of scholarly reviews and primary sources (for example, refereed research articles and/or original materials appropriate to the discipline)

Typically, holders of the qualification will be able to:

- apply the methods and techniques that they have learned to review, consolidate, extend and apply their knowledge and understanding, and to initiate and carry out projects
- critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete), to make judgements, and to frame appropriate questions to achieve a solution - or identify a range of solutions - to a problem
- communicate information, ideas, problems and solutions to both specialist and non-specialist audiences

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 contexts
- the learning ability needed to undertake appropriate further training of a professional or equivalent nature

15. Learning Outcomes

The BSc (Honours) Pharmaceutical Science (top up) degree (Level 6) is awarded to students who have demonstrated the following outcomes. References to the QAA benchmark statements for Chemistry (SBSCChem) are provided in brackets.

1. Demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to the formulation, analysis and development of pharmaceuticals and healthcare products. (SBSCChem 3.2i, 4.2, 5.3i)

2. Adopt a multi-disciplinary approach to problem solving through the integrated application of basic knowledge in the chemical, pharmaceutical and biomedical sciences. (SBSChem3.2iii, 5.3ii)
3. Read, use and critically evaluate appropriate scientific literature. (SBS3.2iv, 4.2viii)
4. Demonstrate an understanding of research design and data analysis. (SBSChem3.2ii, 4.2viii)
5. Integrate numerical, communication, IT skills and scientific knowledge in evaluating and analysing information and formulating hypothesis. (SBSChem5.7)
6. Communicate scientific principles both orally and in writing in accordance with appropriate scientific conventions. (SBSChem5.7i)
7. Obtain and critically evaluate information from a variety of sources in support of scientific argument. (SBSChem 5.7v)
8. Safely and appropriately use laboratory equipment to obtain, record, collate and analyse data. (SBSChem3.2ii)
9. Design a research project. (SBSChem4.4, 5.5vi)
10. Recognise and pursue opportunities for further educational development. (SBSChem3.2iv)
11. Identify targets for personal, academic and career development. (SBS5.7viii, x)

The numbers in brackets below cross reference to the general learning outcomes in the section above.

A. Knowledge and Understanding of:

- A.1 Chemical, pharmacological and biomedical science terminology (1, 2).
- A.2 Formulation of drugs and healthcare products. (1, 2, 7, 8).
- A.3 Analytical methods used in the pharmaceutical and healthcare industries. (1, 2, 7, 8)
- A.4 Discovery, design and development of drugs (1, 2, 7, 8).
- A.5 Statistical techniques and research methods in pharmaceutical sciences (3 - 9).
- A.6 Presentation of scientific findings (6, 8).
- A.7 Career opportunities (10, 11)

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

- B.1 Formulate and test hypotheses (2, 3, 5, 7, 8, 9).
- B.2 Plan, conduct, critically evaluate and report a programme of research (3 - 9).
- B.3 Select and use principles and procedures in a variety of situations (3, 7, 8, 9).
- B.4 Research, analyse and evaluate information from a variety of different sources (1, 3 - 9).
- B.5 Marshal their thoughts to demonstrate an in-depth knowledge of selected topics (3 - 9).
- B.6 Conceptualise current issues and developments in pharmaceutical sciences (3, 7, 9).

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

- C.1 Use laboratory equipment and conduct analytical procedures, appropriate to the pharmaceutical sciences in a safe, accurate and precise manner (8, 9).
- C.2 Prepare appropriately referenced scientific reports (6, 8).
- C.3 Select and carry out appropriate techniques (8, 9).
- C.4 Follow appropriate procedures if unexpected/abnormal results are obtained (8).

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

- D.1 Communicate effectively using a range of media (6).
- D.2 Take responsibility for the planning and execution of their own learning (9, 10).

- D.3 Demonstrate numerical and statistical skills appropriate to a scientist (5, 8, 9).
- D.4 Be competent in the use of IT in a scientific context (5, 7, 8).
- D.5 Work independently and as part of a team (6, 8).
- D.6 Identify and use the appropriate resources (human & physical) to enable successful completion of tasks (4, 9)
- D.7 Manage their time appropriately and meet deadlines (4, 9).
- D.8 Recognise, pursue and enhance employment opportunities (10, 11).

16. Learning and Teaching Strategies and Methods

Core knowledge is delivered mainly via lectures, seminars, laboratory classes and directed private study (A1-7). This is supported by e-learning, which includes the use of the learning platform, Moodle, which utilises a diverse range of interactive resources, such as; formative tests; interactive lessons; video's and; webcasts, to support the learning outcomes . Laboratory-based work concentrates on experimental design, methods and analysis, interpretation and reporting of experimental findings, providing students with the opportunity to apply their core knowledge. All students conduct an independent, laboratory-based research project in their final year of study and also carry out library-based research.

Intellectual skills (B1-6) are developed through lectures, seminars, tutorials and practical classes that encourage integration and analysis. Student-centred activities such as presentations and project work encourage research, analysis and synthesis together with awareness of current issues. The final year research project develops skills in formulating and testing hypotheses and conducting a programme of research. Data analysis, evaluation and interpretation skills are developed through lectures and seminars and then applied via practical components of the course.

Practical skills (C1-4) are developed via laboratory classes, demonstrations, workshops, video, Computer aided learning (CAL) and project.

Transferable skills (D1-8) are developed via IT / laboratory classes, worked examples, subject-specific and generic tutorials, oral presentations, assignments (including careers-related exercises, literature review and project) individual and group work and review of personal development.

17. Assessment Strategy

Assessment of core knowledge is by unseen examinations (A1-6), in-class tests (A1-6), practical reports (A1-6), portfolios (A1-6), oral presentations (A1-6), a project report (A1-6) and a reflective report on a mock interview (A7). Formative assessment is included in all units.

Assessment of cognitive skills is by unseen examinations (B1,B4-6), including data interpretation and critique, practical reports (B1, 3, 4), oral presentations (B1-6), and project report (B1-6). Assessments are directed towards critical evaluation and synthesis.

Assessment of practical skills is by laboratory (C1-4) and project reports (C1-4) including project supervisor's assessment of bench skills.

Assessment of transferable skills is mainly through coursework exercises, practical reports - individual assignments (which include word processing, spreadsheets, graphics) (D1, D3-6, D8), formative group assessments (D5), oral presentations (D1-5, D7), project report (D1-4, D6), project laboratory performance (D2, D3, D5-7) and reflective report on mock interview (D8).

18. Course Structure, Progression and Award Requirements

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

This is 1 year full time course (Level 6) designed to allow students who have successfully completed Levels 4, and 5 of a degree in Pharmaceutical Sciences or a closely related subject, the chance to

¹ www.port.ac.uk/unitwebsearch

“top up” to a BSc (Honours) Pharmaceutical Science degree from the University of Portsmouth. Students will enter the programme with advanced standing and the award of 120 level 4 and 120 level 5 credits by the University’s Recognition of Prior Learning process based on their having demonstrated achievement of appropriate learning outcomes and with reasonable expectation that they will be successful in completing the top-up programme.

This course is a unitised programme consisting of 120 Level 6 credits. With the exception of the Pharmaceutical Science Project (40 credits), each unit is rated at 20 credits and corresponds to approximately 200 hours of study.

A major component of this course is the final year project which provides the opportunity for specialisation through an in depth laboratory based research project. The taught elements of the programme focus on drug development, analysis, formulation and quality assurance. Emphasis is placed on developing independent literature retrieval skills and the course is designed to provide opportunity to develop skills of interpretation, critical analysis and synthesis, and aims to prepare students for either employment or further postgraduate study. Students successfully passing all units (120 credits) in this course would be awarded a BSc (Hons) degree in Pharmaceutical science, with the degree classification calculated on the average Level 6 mark after discounting the lowest 20 credits. No other exit awards are possible.

19. Employability Statement

The programme incorporates key employability skills appropriate to Level 6. As part of a summative assessment within the final year, students are required to search for a suitable graduate position (further study or graduate employment). They are then required to produce a tailored CV and covering letter for this position and undertake a “mock” interview. A designated University employment co-ordinator assigned to the Science Faculty and is an integral part of this process, offering help, support and advice to students when preparing their CV and covering letters. The employment co-ordinator also helps conduct the “mock” interview by playing the role of a human resources representative alongside two academics (one of which is the student’s personal tutor). These interviews are tailor made for each individual student based on their own career choices and are used to provide instant feedback on interview techniques. Students are required to write a reflection on their experiences of the interview as part of a summative assessment linked to the Pharmaceutical Science Project unit.

Students are also asked to develop a personal development plan with their tutor at the start of the course and this is reviewed later in the course. This encourages the students to acknowledge the importance of employability enhancing activities such as voluntary work, attending scientific meetings etc. to enhance prospects after graduation.

Students also undertake a zero-credit-rated tutorial unit where they meet on a regular basis with their Personal Tutor to discuss inter alia development of their career plans.

Course Management

20. Support for Student Learning

- The Course is managed by a Course Leader
- 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 and counselling
- The Academic Skills Unit (ASK)
- The Additional Support and Disability Advice Centre (ASDAC)
- Excellent library facilities
- Student course and unit handbooks provide information about the course structure and University regulations

- Feedback is provided for all assessments
- Personal Development Planning (PDP) for all awards

21. Admissions Criteria

A. Academic Admissions Criteria

Direct entry to this Level 6 (top up) course will be dependent on successful completion of Levels 4 and 5 of a BSc (Hons) Pharmaceutical Science or closely related course prior to entry. The student's prior learning will be mapped to ensure that (s)he has achieved learning outcomes appropriate for entry to the course and in sufficient volume and level such as to provide reasonable confidence of successfully achieving all learning outcomes of the BSc (Hons) Pharmaceutical Science course and receiving an award.

Students entering the course will also be required to have achieved English language competency to IELTSs 6.5 with an even profile (no component less than 6.0).

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
- National Postgraduate Taught Experience 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. National Student Survey (NSS), Postgraduate Taught Experience Survey (PTES), 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 required to undertake appropriate University of Portsmouth learning and teaching programmes
- All academic staff encouraged to seek Higher Education Academy membership
- Academic staff undertake initial and continuing professional development within the Academic Professional Excellence Framework (APEX) programme which is aligned with the Higher Education Academy (HEA)'s UK Professional Standards Framework (UKPSF)
- 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

None.

B. Periodic Programme Review (or equivalent)

The course will be subject to normal monitoring and review policy and procedures.

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

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 2015](#)³).

D. Others

In the 2014 Research Excellence Framework assessment, 16 academic staff from the School of Pharmacy and Biomedical Sciences contributed within the unit of assessment [Allied Health Professions, Dentistry, Nursing and Pharmacy](#)⁴. The results from this submission were excellent with 90% of this submission regarded as world-leading or internationally excellent and 9% nationally recognised. Research-active staff contribute to the Pharmaceutical Science teaching, and research informs the teaching.

26. Further Information

Further information may be found in:

- Student Handbook
- University of Portsmouth Curriculum Framework Document
- University of Portsmouth Prospectus
- [University of Portsmouth](#)⁵ and [School/Department](#)⁶ websites

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

⁴ <http://results.ref.ac.uk/Results/BySubmission/261>

⁵ www.port.ac.uk/

⁶ www.port.ac.uk/school-of-pharmacy-and-biomedical-sciences/