BSc (Hons) Physics, Astrophysics and Cosmology

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.

Copyright

Contents

Course Details

1. Named Awards

BSc (Hons) Physics, Astrophysics and Cosmology

2. Course Code (and UCAS Code if applicable)

C2609S (F301)

3. Awarding Body

University of Portsmouth

4. Teaching Institution

University of Portsmouth

5. Accrediting Body

Institute of Physics *(accreditation in progress)*

6. QAA Benchmark Groups

QAA Physics, Astronomy and Astrophysics

7. Document Control Information

June 2017

8. Effective Session

2017/2018

9. Author

Dr Chris Dewdney

10. Faculty

Science

11. Department

School of Earth and Environmental Sciences

Curriculum

12. Educational Aims

To develop competent physicists with a broad knowledge of physics and its application in astrophysics and cosmology.

In addition, and more generally, the course aims to:

- Provide a stimulating programme in physics to develop a sound base of knowledge and understanding with particular emphasis on applications in astrophysics and cosmology.

- Develop critical, analytical, practical, professional, problem solving, research and communication skills and prepare students for postgraduate study and / or professional qualifications in employment.
- Provide insight and experience, in some areas of astrophysics and cosmology, to the frontiers of research.
- Develop the skills necessary for life-long independent learning.
- Develop an appreciation of what constitutes ethical scientific behaviour.
- Provide a supportive, challenging, stimulating and rewarding study environment.
- Develop a range of key life and employability skills through a range of opportunities provided in the study units.
- Accommodate student needs in relation to maximising their career potential by enabling them to develop knowledge, understanding and skills in their chosen areas of interest.
- Examine in depth an area of contemporary astrophysics and cosmology enabling critical engagement with research publications.

13. Reference Points

- University of Portsmouth Curriculum Framework Document (2016)
- The revised (2012) curricula requirements of the Institute of Physics (IOP) have been instrumental in the design of the programme.
- 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
- QAA Subject Benchmark Statement, Physics, Astronomy and Astrophysics (QAP)
- University of Portsmouth Examination and Assessment Regulations (2015)
- University of Portsmouth Employability Strategy 2009

14. General Learning Outcomes

Level 4

Certificates of Higher Education are awarded to students who have demonstrated:

- knowledge of the underlying concepts and principles associated with their area(s) of study, and an ability to evaluate and interpret these within the context of that area of study
- an ability to present, evaluate and interpret qualitative and quantitative data, in order to develop lines of argument and make sound judgements in accordance with basic theories and concepts of their subject(s) of study

Typically, holders of the qualification will be able to:

- evaluate the appropriateness of different approaches to solving problems related to their area(s) of study and/or work
- communicate the results of their study/work accurately and reliably, and with structured and coherent arguments
- undertake further training and develop new skills within a structured and managed environment

And holders will have:

- the qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility

Level 5

Diplomas in Higher Education are awarded to students who have demonstrated:

- knowledge and critical understanding of the well-established principles of their area(s) of study, and of the way in which those principles have developed
- ability to apply underlying concepts and principles outside the context in which they were first studied, including, where appropriate, the application of those principles in an employment context
- knowledge of the main methods of enquiry in the subject(s) relevant to the named award, and ability to evaluate critically the appropriateness of different approaches to solving problems in the field of study
- an understanding of the limits of their knowledge, and how this influences analyses and interpretations based on that knowledge

Typically, holders of the qualification will be able to:

- use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis
- effectively communicate information, arguments and analysis in a variety of forms to specialist and non-specialist audiences, and deploy key techniques of the discipline effectively
- undertake further training, develop existing skills and acquire new competences that will enable them to assume significant responsibility within organisations

And holders will have:

- the qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and decision-making

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

A. Knowledge and Understanding of:

A.1 The principles of Mechanics Relativity and Gravitational Physics, Quantum and Nuclear Physics, Condensed Matter Physics, Oscillations and Waves, Electromagnetism, Optics, Thermodynamics and Statistical Physics (QAP,IOP), as well as the Physics of stars, galaxies and other astrophysical systems, and the principles of Cosmology.
A.2 The mathematical and computational principles and techniques necessary for A1.
A.3 The application of physics in a variety of contexts, with particular emphasis to applications to astrophysical systems and in cosmology.
A.4 The methods of scientific investigation and solution of problems through the design and execution of practical observational and data analysis studies, and mathematical and computational models with particular reference to astrophysics and cosmology.

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

B.1 Plan, conduct and report on a programme of research including the formulation and testing of hypotheses. Critically evaluate arguments, assumptions and data, make judgements and frame questions to achieve a solution to a problem or identify a range of solutions.
B.2 Select, apply and evaluate appropriate mathematical, scientific, laboratory, data collection, observation and computer-based methods and principles in the analysis and solution of a variety of physical problems with particular reference to astrophysics and cosmology.
B.3 Be creative and innovative in the analysis and solution of physical problems with particular reference to astrophysics and cosmology and presentation of results.
B.4 Generate, analyse and process data to test a hypothesis and to assess the reliability of data in order to critically assess the significance of results, and to generate, analyse and relate especially to the theory of the astrophysical context of interest results from numerical modelling or observation.
B.5 Work with confidence from basic core physics principles to develop an understanding of physical processes in the astrophysical and cosmological contexts and, on the basis of such understanding, to appraise proposed solutions to topical problems.

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

C.1 Plan, conduct and report on practical laboratory, astronomical observational, theoretical or computational scientific investigations.
C.2 Collect, record and analyse data using a variety of suitable techniques, critically comparing astronomical observations with theoretical or computational model predictions as appropriate.
C.3 Undertake laboratory investigations in a responsible and safe manner, paying due attention to risk assessment, rights of access, relevant health and safety regulations, and sensitivity to the impact of investigations on the environment and human health.
C.4 Critically evaluate and use scientific literature appropriately and cite references correctly.
C.5 Identify and work towards targets for personal, academic and career development including the ethical dimension and commercial awareness and opportunities for enterprise.
C.6 Develop an adaptable, flexible and professional approach to study and work.
C.7 Develop the skills necessary for self-managed and lifelong learning including an opportunity to develop second language skills.
C.8 Prepare a concise, informative and accurate written report with an appropriate treatment of uncertainties and evaluation of significance, based on work carried out during the project, in the style of a scientific paper in a typical research journal in astrophysics and cosmology.

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

D.1 Communicate appropriately to a variety of audiences in written, oral and graphical forms using a variety of media.

D.2 Critically evaluate data considering sample selection, accuracy, precision and uncertainty during planning, collection, recording and analysis of data derived from observation, computation or laboratory.
D.3 Retrieve, evaluate and combine data from a variety of sources.
D.4 Identify individual and collective goals and responsibilities and perform ethically and in a manner appropriate to these roles.
D.5 Recognise and respect the views of others and evaluate performances as an individual and a team member.
D.6 Analyse and solve problems using theoretical, computational and practical techniques.

16. Learning and Teaching Strategies and Methods

Physics is a hierarchical subject and the core of physics (A1) is developed as the course progresses. Subject knowledge and understanding is acquired through a blended range of lectures, tutorials, literature reviews, observational, laboratory and coursework practical individual and group exercises. The core belief that active learning generates deep learning is reflected in many of the pedagogic methodologies employed.

Mathematical principles and techniques are developed specifically in the physics context in particular units at level 4 and 5 (A2).

Application of physics in astrophysics and cosmology is stressed throughout many units, and in addition specialist units at levels 5 and 6 develop a knowledge and understanding of specific problems and techniques in astronomy, astrophysics and cosmology and the essential role of core physics within such topics. There is a strong emphasis on problem solving with particular reference to astrophysics and cosmology throughout the course (A3).

Knowledge of instruments and experimental techniques is developed to the initial level through the practical units and observational work at level 4, but practical work is also a vehicle for developing a deep understanding of the core of physics in some units (A3, A4). Complementary to instrumental/observational and data analysis methodologies, computer modelling and simulation play a vital role in understanding complex physical and astrophysical systems and these skills are developed in the Computational Physics units at level 4 and 5 and in specific contexts throughout the degree.

In addition to units that develop appropriate general methodologies many units develop a series of problem-based investigations also intended to extend deep learning of the core of physics (A4).

Cognitive skills are embedded throughout the programme and are developed through the teaching and learning programme.

Research methods are initially explicitly introduced in Space Science and Applications of Physics that requires critical use and combination of a variety of sources of information. Research methods are also taught embedded within many units and especially in the laboratory and computational physics units where problem-based learning requires the use of a variety of techniques and research methodologies.

B1 is particularly developed during the level 6 project.

Problem analysis and solution is the basis of physics and so B2 is developed in a variety of contexts through all units.

B3 is encouraged through many units; including in particular the computational and laboratory units at levels 4 and 5 as well as the projects.

B4 is primarily developed through the astronomy units and the projects, although other units will also contribute in this respect.

B5 is demonstrated within many units especially the level 5 and 6 options.

C1-C3 are particularly stressed in the Practical Laboratory unit at level 4 and Computational Physics units at level 4, 5 and 6 and the level 6 project.

C4 is developed in all units where essay or report coursework is a requirement and where students are taught and required to use an appropriate referencing standard for example in the level 6 project.

C5-C7 are introduced at level 4 in the Space Science and Applications of Physics unit at level 4. There is an elective slot at level 5 where students may choose to study a second language.

As the course progresses through the levels students develop skills appropriate to C6 and C7 and by level 6 are required to embrace flexible approaches for self-managed learning (specifically in self-managed project work in the project and the options).

C8 is developed during individual tutorial supervision sessions during the major project at level 6.

D1 is developed in a number of units where students are required to give oral and graphical presentations to staff and their peer groups. The project also requires both an oral and written presentation of the results of the work.

D2 is addressed in a number of units where such analysis of observational data is required.

D3 is addressed in the preparation for the project and the project itself and in many other units where research work is required. Critical use of a variety of sources of information and research methods is essential within a number of units though out the degree including the project.

D4 and D5 are addressed specifically in the units requiring group work, for example Applications of Physics in Astronomy and Industry and the group project unit. Many other units also require students to work in groups and assess their own and group members' performance.

D6 is a vital component of all of the units as may be expected in any physics degree. Problem solving techniques and practice is provided through the on-line Mastering Physics system at levels 4 and 5.

17. Assessment Strategy

Assessment of the knowledge base and subject understanding is through a combination of:

- Unseen examinations, in-class tests [A1, A2, A3]
- Assessed coursework which takes the form of essays, coursework reports, laboratory reports, oral examinations and presentations as appropriate to the units studied [A4-4]
- Assessment is also through level 6 project [A1-4]
- The Moodle VLE will be used appropriately to facilitate assessments.

Assessment of the cognitive skills is through a combination of:

- Integrated scientific individual and group reports of investigations and solutions of laboratory, computational and theoretical physics problems [B1-4]
- Formal open and closed book examinations requiring time-limited intellectual response [B2, B3, B5]
- Presentations requiring the transformation and representation of ideas in clear, concise and verbal and visual form [B3]
- Extended project work requiring deeper intellectual reflection and knowledge of topical physical concerns and problems [B1-5]

Practical and professional skills are assessed through

- Coursework, laboratory and computational tasks and reports, appropriate to the particular units [C1-C7]
- Project reports and defended presentations [C1-C7]
- Many of the laboratory activities will constitute practical examples of developing professional practice

Transferable skill assessment is embedded in the formal assessment of most units through:

- Open and closed book formal and in-class examination [D6]

- A variety of individual and group [D4-5] coursework, computer-based assessments, report writing and oral and poster presentations [D1-6]
- Use of Moodle VLE support improves students' IT skills and provides essential learning support, by way of formative and summative assessments and to facilitate collaborative engagement [D1-6]
- Many transferrable and key skills are assessed in extended project work across the units [D1-6]

Feedback from formative assessment is recognised as a vital part of the learning process and is embedded in all units. Unit specific feedback sheets are used in each unit to provide both formative and summative feedback as appropriate on the degree to which the work presented achieves the standards laid out in the marking criteria and scheme for the assessment.

The general strategy in the School of Earth and Environmental Sciences (SEES) is to have an appropriate range of formative and summative assessment methods at all levels. Students are never faced with a preponderance of any one type of assessment that might favour or disadvantage any student or groups of students. The type of learning that students experience in SEES and also in the Faculty of Technology allows for a very wide range of potential assessment methods. Students will be assessed by means of open and closed-book examination, poster and oral presentations both individually and in groups. Students will be required to submit portfolios, laboratory reports and laboratory notebooks. They will experience on-line e-assessment, both formative and summative.

Formative assessment is used to ensure students understand the standards expected in the summative assessments and to develop assessment techniques. Summative assessment is used to discern the degree to which the learning outcomes have been achieved. Problem sets and other formative assignments such as reports of practical activities are set on a regular basis in all units and formal formative feedback is provided using unit-specific feedback sheets. Mock examinations with formative feedback are used in units with summative assessment by examination to develop examination techniques and understanding. Feedback on summative coursework assessments is provided by assessment specific feedback sheets. Feedback on summative closed-book examinations is provided through written comments on examination scripts that are returned to the student for appraisal and through feedback sheets and model answers.

Level 4

At level 4, the assessment approaches are designed to introduce the full range of assessment types experienced in the course.. Standards expected at level 4 are established through formative assessment. The students are expected to begin to develop important professional skills such as accurate use and computer control of automated instrumentation and recording of data and reporting in a range of document types and this is assessed at first formatively until a standard is reached whereupon further work is submitted for summative assessment. The commercial (Pearson) Mastering Physics on-line problem solving and tutorial system is used to provide students with instant feedback on their progress.

Level 5

At level 5 students will face a similar range of assessment activities as at level 4 but these are designed to assess increased levels of skills of knowledge appropriate to level 5. There is an increased standard of professionalism expected and more emphasis on the use of closed book examination. Understanding of the standards required in the assessments and assessment techniques are again developed through formative assessment. Model answers to formative and summative examinations are provided, where appropriate, to inform students of their performance against the expected standards. Coursework reports will be expected to pay more attention to errors and statistics and there should be more depth and critical analysis of data and methodology. The commercial (Pearson) Mastering Physics on-line problem solving and tutorial system is used to provide students with instant feedback on their progress.

Level 6

Work is expected to begin to conform more fully to professional standards expected. Assessments are designed to test the higher-level skills of analysis and synthesis of knowledge expected at this level. Formative assessment feedback is used to establish the benchmark standards of performance. The main difference in assessment is in the physics project (40 credits) and the minor group project which have several artefacts covering different aspects of the skills required in project work. Formative assessment feedback is provided from the start to ensure the project is developed and carried out in a manner and to a standard expected in professional work. Higher-level skills of organisation and planning will be expected and the formative and summative assessments reflect this.

18. Course Structure, Progression and Award Requirements

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

This degree may be completed in 3 years full time or 4 years including the optional sandwich year. The degree brings together the University's expertise in teaching physics and its applications and its world-leading cosmology research to address identified regional and national shortage of graduates with degrees relating to physics. The QAA benchmarks for Physics and Astronomy have been consulted and used to inform the units. The Institute of Physics (IOP) also issues a set of benchmarks and criteria for accredited Physics degrees which are also satisfied. The course is compatible with existing teaching provision in SEES and various Faculty of Technology programmes. There is sharing of units with other degree pathways.

The degree is constituted using 20 credit units with a 40 credit, level 6 project. Each credit is equivalent to 10 hours of student learning. At level 4 the course offers no choice in units – this is necessary as students are expected to enter the course from a wide variety of backgrounds and there is a need to bring them all to a common standard. At levels 5 and 6 there are optional units to choose from that enable students to tailor the course towards their individual interests.

There is the option to undertake study through the sandwich degree pathway in which students can undertake a placement year, between level 5 and 6, in industry or other environment away from the university and in addition to the normal study diet of the degree. In sandwich mode students complete the Physics Industrial Placement unit. The placement unit is credit rated at 40 credits but credits from this unit do not count towards the degree but rather complement the academic studies with industrial work experience.

Exit awards include:

- Certificate in Higher Education in Physics, Astrophysics and Cosmology (120 credits)
- Diploma in Higher Education in Physics, Astrophysics and Cosmology (240 credits)
- BSc in Physics, Astrophysics and Cosmology (300 credits)
- BSc (Hons) in Physics, Astrophysics and Cosmology (360 credits)

Standard University rules apply. The regulations must be consulted for a full description of exit awards.

Students may opt to transfer to the BSc in Applied Physics at the end of level 4 or level 5, subject to meeting the admissions requirements for the BSc Applied Physics and passing the necessary units for progression to level 5 or 6 in Applied Physics.

Students achieving an overall end-of-level unit average of no less than 50% will be eligible for consideration by the Course Transfer Panel for transfer to either MPhys Physics, Astrophysics and Cosmology or the MPhys Applied Physics subject to passing the necessary units for progression to level 5 or 6.

At level 5, students may opt to study 20 credits of a language as part of the course.

[1] www.port.ac.uk/unitwebsearch

19. Employability Statement

This degree shares the benefits of the employer links that have been built up for the physics degrees since 2010. Students may optionally undertake Summer Placements at the end of year two through the South East Physics Network scheme or independently. Employers are engaged in programme development through the Physics Industry Advisory Board and in curriculum delivery in some units. At level 6 students may undertake an individual or group, industry co-supervised project. These projects give valuable insight into the application of physics in industry and experience of the workplace.

It is intended that the degree will be accredited by the Institute of Physics (IOP) providing graduates with a vocational route into a professional career as a chartered physicist (although no employers require this). Physics graduates are highly regarded in many areas of industry, the civil service and other areas. Physics graduates work in the IT, electronics, defence, health, energy, aerospace and most other industries. Graduates will be numerate and, particularly for those who have developed good mathematical and computational modelling skills, there have always been openings in the financial industries too. Many graduates may choose to progress to further study at MSc or PhD. Research opportunities for physicists are numerous and varied in nature.

The deep project and research experience and professional skills developed at level 6 will ease students' progression to academic or industrial research positions and enable them to add value straight away.

Careers education is initiated at level 4 in the unit Space Science and Applications of Physics that focuses on the role of physics in employment. Students will be exposed to visiting lecturers from industry, will undertake industrial and other visits throughout the degree and may have the opportunity to undertake their level 6 project in collaboration with research groups or space-related industry. This unit also has also a contribution to the curriculum delivered by the university's professional careers and employability staff and forms the context for part of the assessment of the unit.

Students enhance their employability considerably by undertaking industrial or research placements and hence are encouraged to engage with the South East Physics Network Summer Bursary Scheme and with other such placement or widening experience opportunities that arise. Students are supported by a dedicated part-time Employer Engagement Fellow who assists with finding placements and with advice on CV's and applications.

Personal Development Planning will include the identification and review of skills at all levels of study and will be delivered and progress monitored through the tutorial system. Students, from the start, will be expected to keep a personal development e-portfolio that will act both as a focus for PDP activity and will also introduce them to CPD practice.

Course Management

20. Support for Student Learning

- The Course is managed by a Course Leader
- All learning will be facilitated by the Moodle VLE and other bespoke on-line learning resources such as those provided by IOP, HEA Physical Sciences and National Instruments accredited programmes
- Pearson's Mastering Physics on-line tutoring system supports learning at levels 4 and 5
- An induction programme introduces the student to the University and their course and level 5 and 6 induction also provides orientation for students at the beginning of the year
- Each student has a personal tutor, responsible for pastoral support and guidance
- Students on the sandwich degree have an academic tutor to advise, monitor and support during the placement year
- University support services include careers, financial advice, housing, counselling etc.

- The Academic Skills Unit (ASK)
- The Maths Café
- The Additional Support and Disability Advice Centre (ASDAC)
- Excellent library facilities
- 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.
- Formative and summative feedback is provided for all assessments
- Personal Development Planning (PDP) for all awards

21. Admissions Criteria

A. Academic Admissions Criteria

- Students are normally expected to have GCSE English at grade C or above, or equivalent.
- Generally, admission offers are made above the minimum 104 points to include 2 A levels or equivalent, which may include the Science 14-19 diploma, A-levels, AS-levels, vocational A-levels and other point rated qualifications. Students will normally be expected to have at least 32 points from Physics to A2 or equivalents.
- Students will be admitted if they have completed a recognised appropriate Access course. Access to Science: achieved merit or distinction in at least 45 credits at level 3, or equivalent, with appropriate mathematics and physics content.
- Professional skills and experience will be recognised.
- Other qualifications and experience will be considered on an individual basis.
- Current University Recognition of Prior Learning Policy is applied in an individual basis.
- Applications from mature and international students, and students from underrepresented groups, are encouraged.
- International applicants will be required to have IELTS requirements at 6.0 (or equivalent).
- If appropriate, prior learning may be assessed and accredited.

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), 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 Regulations*[2]).

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:

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

- 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

Full accreditation from the Institute of Physics is in progress.

B. Periodic Programme Review (or equivalent)

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

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

None.

26. Further Information

Further information may be found in:

- Student Handbook
- University of Portsmouth Curriculum Framework Document
- University of Portsmouth Prospectus
- University of Portsmouth[4] and School[5] websites

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

[4] www.port.ac.uk/

[5] www.port.ac.uk/school-of-earth-and-environmental-sciences/