

## Course Specification

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<b>Status:</b>	Validated

## Core Information

<b>Awarding Body / Institution:</b>	University of Wolverhampton		
<b>School / Institute:</b>	School of Pharmacy		
<b>Course Code(s):</b>	PY002H01UV PY002H31UV	Full-time Part-time	3 Years 6 Years
<b>UCAS Code:</b>			
<b>Course Title:</b>	BSc (Hons) Pharmaceutical Science		
<b>Hierarchy of Awards:</b>	Bachelor of Science with Honours Pharmaceutical Science Bachelor of Science Pharmaceutical Science Diploma of Higher Education Pharmaceutical Science Certificate of Higher Education Pharmaceutical Science University Statement of Credit University Statement of Credit		
<b>Language of Study:</b>	English		
<b>Date of DAG approval:</b>	30/Jun/2017		
<b>Last Review:</b>	2014/5		
<b>Course Specification valid from:</b>	2010/1		
<b>Course Specification valid to:</b>	2020/1		

## Academic Staff

<b>Course Leader:</b>	Dr Waseem Kaialy
<b>Head of Department:</b>	Dr Colin Brown

# Course Information

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<b>Location of Delivery:</b>	University of Wolverhampton
<b>Category of Partnership:</b>	Not delivered in partnership
<b>Teaching Institution:</b>	University of Wolverhampton
<b>Open / Closed Course:</b>	This course is open to all suitably qualified candidates.

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## Entry Requirements:

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Entry requirements are subject to regular review. The entry requirements applicable to a particular academic year will be published on the University website (and externally as appropriate e.g. UCAS)

Entry requirements for BSc Pharmaceutical Science:

GCSE – Applicants will normally be expected to hold GCSE English Language and Maths at grade C+/4 or equivalent

A-Level minimum of BB or CDD to include Chemistry at grade C

BTEC Extended Diploma in Applied Science with minimum MMP

BTEC Diploma in Applied Science with DM

Access to HE Diploma with 60 credits overall, 45 level 3 credits, of which 18 will be passed with minimum Merit and include Maths, Chemistry and Biology.

Scottish Highers – CDDDD

(equates to 81 points)

International Baccalaureate: - 28+ overall with a minimum of 5 in higher level biology plus a minimum of 4 in two additional higher level subjects to include one other science subject preferably chemistry or further maths

Successful completion of the foundation year of our BSc (Hons) Science and Engineering with Foundation Year guarantees entry on to this course

Foundation Years – . Foundation Years – External foundation Years: To be considered by the admission tutor on application. Home Foundation Year passes in all modules for entry onto BSc.

Other entry qualifications may be acceptable and will be considered on an individual basis.

## Distinctive Features of the Course:

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The course will provide you with a range of progressive and challenging learning opportunities informed by research and scholarly activity. The integrated approach will foster the development of a broad knowledge base which will equip you for the demands on the modern pharmaceutical industry.

## Educational Aims of the Course:

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The BSc (Hons) Pharmaceutical Science course will provide you with a range of progressive, coherent and challenging learning opportunities informed by research, scholarly activity and appropriate development of skills. Pharmaceutical Science is a relatively new discipline and is concerned with fostering a multi-disciplinary approach towards the study of exciting new developments in the chemical, biological and biomedical science areas focusing upon the biochemistry, pharmacology, design, methods of analysis and delivery of pharmaceutical substances. You will also be supported in the development of intellectual and key interpersonal skills as well as subject knowledge that will equip you for life-long learning and employability.

Completion of this course with a minimum grade of a 2:2 (with Honours) will allow you to progress onto the MSci Pharmaceutical Science course at level 7.

The course aims to produce high quality pharmaceutical science graduates with the generic, subject-specific and transferable knowledge and skills suited to a career in the pharmaceutical industry or other related laboratory-based scientific disciplines. You will have the opportunity to study the Wolverhampton Employability Award up to gold level. You will also be supported in seeking placement opportunities either as a sandwich year or over the summer vacation.

#### Intakes:

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September

#### Major Source of Funding:

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Office for Students (OFS)

#### Tuition Fees:

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Tuition fees are reviewed on an annual basis. The fees applicable to a particular academic year will be published on the University website.

Year	Status	Mode	Amount
2020/1	Home / EU	Full Time / Sandwich	£9250.00
2020/1	Overseas	Full Time / Sandwich	£12250.00
2020/1	H	Part Time	£3050.00
2020/1	Overseas	Part Time	£6125.00
2021/2	H	Full Time / Sandwich	£9250.00
2021/2	Overseas	Full Time / Sandwich	£13450.00
2021/2	H	Part Time	£3100.00
2022/3	H	Full Time / Sandwich	£9250.00
2022/3	Overseas	Full Time / Sandwich	£13950.00
2022/3	H	Part Time	£3120.00

#### PSRB:

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PY002H01UV (Full-time)

Professional Accreditation Body:

Royal Society of Biology

Accrediting Body:

Royal Society of Biology

Accreditation Statement:

"Accredited by the Royal Society of Biology for the purpose of meeting, in part, the academic and experience requirement of membership and Chartered Biologist (CBiol)."

Approved	Start	Expected End	Renewal
01/Jul/2020	01/Jul/2020		30/Jun/2025

PY002H31UV (Part-time)

Professional Accreditation Body:  
Royal Society of Biology

Accrediting Body:  
Royal Society of Biology

Accreditation Statement:  
"Accredited by the Royal Society of Biology for the purpose of meeting, in part, the academic and experience requirement of membership and Chartered Biologist (CBiol)."

Approved	Start	Expected End	Renewal
01/Jul/2020	01/Jul/2020		30/Jun/2025

Course Structure:

## September (Full-time)

Full time and Sandwich Undergraduate Honours students normally study 120 credits per academic year; 60 credits semester 1 and 60 credits semester 2.

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Module	Title	Credits	Period	Type
4PY011	The Physicochemical Nature of Drugs	20	SEM1	Core
4BM016	Human Form & Function	20	SEM1	Core
4PY012	Scientific Communication and Undergraduate Development	20	SEM1	Core
4PY009	Principles of Drug Action	20	SEM2	Core
4PY008	Introduction to Microbiology	20	SEM2	Core
4PY013	Molecular Basis of Life	20	SEM2	Core

## September (Full-time)

Full time and Sandwich Undergraduate Honours students normally study 120 credits per academic year; 60 credits semester 1 and 60 credits semester 2.

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Module	Title	Credits	Period	Type
5BC001	Molecular Biosciences	20	SEM1	Core
5PY017	Pharmaceutical Microbiology	20	SEM1	Core
5PY010	Therapeutic Pharmacology	20	SEM1	Core
5PY015	Practical Pharmaceutical Techniques	20	SEM2	Core
5PY023	Contemporary Drug Design	20	SEM2	Core
5PY014	Principles of Drug Development and Formulation	20	SEM2	Core

## September (Full-time)

Full time and Sandwich Undergraduate Honours students normally study 120 credits per academic year; 60 credits semester 1 and 60 credits semester 2.

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Module	Title	Credits	Period	Type
6PY004	Honours Project (Pharmaceutical Sciences and Pharmacology)	40	YEAR	Core
6PY005	Advanced Pharmaceutical Formulation	20	SEM1	Core
6PY002	Pharmaceutical Biotechnology and Molecular Biology	20	SEM1	Core
6BC003	Quality Assurance and Biomolecular Analysis	20	SEM2	Core
6PY006	Biochemical Pharmacology	20	SEM2	Core

Please note: Optional modules might not run every year, the course team will decide on an annual basis which options will be running, based on student demand and academic factors, to create the best learning experience.

## Learning, Teaching and Assessment

Academic Regulations Exemption:

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None.

Reference Points:

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[UK Quality Code for Higher Education](#)

[Qualifications Frameworks](#)

[Characteristics Statements](#)

[Credit Frameworks](#)

[QAA Subject Benchmark Statements for Pharmacy](#)

Overview of Assessment:

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As part of the course approval process, the course learning outcomes were mapped to each of the modules forming the diet of the programme of study. This process confirmed that all course learning outcomes can be met through successful completion of the modules. This mapping applies to the final award as well as to all of the intermediate awards.

<b>Learning Outcomes</b>	<b>Modules</b>
<b>CERTHE01</b> Demonstrate knowledge of the underlying concepts and principles associated with your area(s) of study, and an ability to evaluate and interpret these within the context of that area of study	
<b>CERTHE02</b> Demonstrate 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 your subject(s) of study.	
<b>CERTHE03</b> Evaluate the appropriateness of different approaches to solving problems related to your area(s) of study and/or work	
<b>CERTHE04</b> Communicate the results of your study/work accurately and reliably, and with structured and coherent arguments	
<b>CERTHE05</b> Demonstrate the qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility	
<b>DIPHE01</b> Demonstrate knowledge and critical understanding of the well-established principles of your area(s) of study, and of the way in which those principles have developed with an understanding of the limits of your knowledge, and how this influences analyses and interpretations based on that knowledge.	
<b>DIPHE02</b> Demonstrate the 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.	
<b>DIPHE03</b> Demonstrate 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.	
<b>DIPHE04</b> Use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis.	
<b>DIPHE05</b> 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.	
<b>DIPHE06</b> Demonstrate the qualities and transferable skills necessary for employment, requiring the exercise of personal responsibility and decision-making and undertake further training, developing existing skills and acquire new competences that will enable them to assume significant responsibility within organisations.	
<b>BHONSN01</b> Demonstrate a systematic understanding of key aspects of pharmaceutical science, 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 with an appreciation of the uncertainty, ambiguity and limits	

**BHONSN02** Demonstrate an ability to deploy accurately established techniques of analysis and enquiry within pharmaceutical science and apply the methods and techniques that they have learned to review, consolidate, extend and apply your knowledge and understanding, and to initiate and carry out projects.

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**BHONSN03** Demonstrate 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.

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**BHONSN04** Demonstrate the ability to manage your own learning, and to make use of scholarly reviews and primary sources (for example, refereed research articles and/or original materials appropriate to pharmaceutical science) and communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.

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**BHONSN05** 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.

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**BHONSN06** Demonstrate 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.

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**BHONS01** Demonstrate a systematic understanding of key aspects of pharmaceutical science, 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 with an appreciation of the uncertainty, ambiguity and limits of knowledge.

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**BHONS02** Demonstrate an ability to deploy accurately established techniques of analysis and enquiry within pharmaceutical science and apply the methods and techniques that they have learned to review, consolidate, extend and apply your knowledge and understanding, and to initiate and carry out projects.

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**BHONS03** Demonstrate 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.

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**BHONS04** Demonstrate the ability to manage your own learning, and to make use of scholarly reviews and primary sources (for example, refereed research articles and/or original materials appropriate to pharmaceutical science) and communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.

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**BHONS05** 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.

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**BHONS06** Demonstrate 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.

## Modules

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### Teaching, Learning and Assessment:

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You will undertake a wide range of learning activities including:-

- Computer based learning
- Supported learning using the University VLE (CANVAS) for information, synchronous and asynchronous communications
- Lectures
- Tutorials (small group)
- Tutorials (one-to-one)
- Workshops
- Case studies
- Structured laboratory exercises
- Individual structured assignment-based learning
- Directed study
- Individual or group investigative practical exercises
- Individual and group research project investigations
- Group work to develop and assess a wide range of manipulative, logic and other transferable skills.

Assessment methods will include:-

- Written reports
- Essays
- Literature reviews
- Exams
- Group presentations
- Poster presentations

All summative assessments will be supported by equivalent formative assessments which will enable you to gain the skills necessary to achieve the learning outcomes of the course. A particular focus will be placed on practical and analytical skills and support to develop these will be provided through extensive practical training at each level of the course. Analytical skills will be developed sequentially throughout each year of the course and you will gain extensive experience in data generation, interpretation and manipulation. Workshops and small group tutorials will provide extensive support in developing these skills

The overall aim of the course is to develop independent learners who are able to reflect on their learning in a professional manner and apply acquired knowledge in an integrated fashion.

### Assessment Methods:

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At the University of Wolverhampton, a variety of modes of assessment will be used to support and test your learning and progress and to help you develop capabilities that are valued beyond your University studies and into your working life. Your course may include a variety of assessment activities:

Written examinations (including online examinations, open and closed book examinations and quizzes)  
Coursework (for example, essays, reports, portfolios, project proposals and briefs, CVs, poster presentation)  
Practical (for example, oral and video presentations, laboratory work, performances, practical skills assessment)

In the final year of your undergraduate degree, and at the end of your postgraduate degree, you are likely to be expected to write an extended piece of work or research, such as a dissertation or a practice-based piece of research.



## Student Support:

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A wide range of support for learning will be available to Pharmaceutical Science students. Generic support will include the use of central services such as ASK@WLV services, for general enquiries, and City Campus Library. The Library will provide library facilities as well as electronic and literature search resources and introduce study skills to students. Support for study skills will also be embedded within individual modules. Outside of the module environment, 'drop-in' opportunities at the Library or with demonstrators will be available.

For more specific support, students will be able to contact their personal tutors as well as being able to use SAMS to contact individual members of staff for face-to-face meetings. Specialist software (PharmaCALogy, PebblePad, GraphPad Prism, Chart, etc.) is likely to be introduced within a module setting, so further enriching the learning environment for students, with additional staff support being offered where necessary.

Using the above mentioned frameworks to support the development of study skills, autonomous student learning will be encouraged.

## Employability in the Curriculum:

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This programme will provide career opportunities in the areas of drug design and development, basic developmental research and clinical trials.



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