University of Wolverhampton

Course Specification

Published Date:	02-Jul-2021
Produced By:	Oliver Jones
Status:	Validated

Core Information

Awarding Body / Institution:	University of Wolverhampton		
School / Institute:	School of Pharmacy		
Course Code(s):	PY016Q01UV	Full-time	4 Years
UCAS Code:	F151		
Course Title:	MSci (Hons) Pharmaceutical Science		
Hierarchy of Awards:	Master in Science with Honours Pharmaceutical Science 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		
Language of Study:	English		
Date of DAG approval:	25/Sep/2017		
Last Review:	2016/7		
Course Specification valid from:	2016/7		
Course Specification valid to:	2022/3		

Academic Staff

Course Leader:	Dr Waseem Kaialy
Head of Department:	Dr Colin Brown

Course Information

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

Entry Requirements:

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

2017 Entry

- A-Level minimum BB or CDD to include Chemistry at grade C
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- BTEC QCF Level 3 Extended Diploma Applied Science with minimum DDM.
- Applicants will normally be expected to hold GCSE English and Maths at grade C+/4 or equivalent
- If you've got other qualifications or relevant experience, please contact The Gateway for further advice before applying.
- International entry requirements and application guidance can be found here

  Those who do not meet the entry requirements may be offered an alternative course.

Distinctive Features of the Course:

The MSci 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. At Masters level you will have the opportunity to undertake in-depth study of new and emerging themes in pharmaceutical science which will equip you with cutting edge knowledge in the subject and enable you to specialise in an area of choice. 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.

Educational Aims of the Course:

1. Apply a range of graduate skills to investigation in pharmaceutical science
2. Show competency in scientific method; its values, application and extension as applied to pharmaceutical science
3. Demonstrate the ability to use a range of laboratory-based techniques
4. Critically evaluate modern concepts of disease and the contribution of new technologies to the treatment of disease
5. Synthesise and interpret new knowledge and apply it to the field of pharmaceutical science
6. Design, implement and evaluate scientific research in a given area of Pharmaceutical Science

Intakes:

September

Major Source of Funding:

Office for Students (OFS)

Tuition Fees:

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	H	Full Time / Sandwich	£9250.00
2020/1	Overseas	Full Time / Sandwich	£12250.00
2021/2	H	Full Time / Sandwich	£9250.00
2021/2	Overseas	Full Time / Sandwich	£12950.00

PSRB:

None

Course Structure:

September (Full-time)

Year 1

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

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
4PY013	Molecular Basis of Life	20	SEM2	Core
4PY008	Introduction to Microbiology	20	SEM2	Core
4PY009	Principles of Drug Action	20	SEM2	Core

September (Full-time)

Year 2

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

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)

Year 3

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

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

September (Full-time)

Year 4

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

Module	Title	Credits	Period	Type
7PY011	Research Methods	20	SEM1	Core
7PY003	Pharmaceutical Analysis	20	SEM1	Core
7PY026	Molecular Medicine	20	SEM1	Core
7PY025	Frontiers in Pharmaceutical Sciences	20	SEM2	Core
7PY013	Pharmacoepidemiology	20	SEM2	Core
7PY014	Strategies and Methods in Drug Discovery, Design and Development	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:

None

Reference Points:

[UK Quality Code for Higher Education](#)

[Qualifications Frameworks](#)

[Characteristics Statements](#)

[Credit Frameworks](#)

[QAA Subject Benchmark Statements for Pharmacy](#)

Learning Outcomes:

CertHE Course Learning Outcome 1 (CHECLO1)

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

CertHE Course Learning Outcome 2 (CHECLO2)

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.

CertHE Course Learning Outcome 3 (CHECLO3)

Evaluate the appropriateness of different approaches to solving problems related to your area(s) of study and/or work

CertHE Course Learning Outcome 4 (CHECLO4)

Communicate the results of your study/work accurately and reliably, and with structured and coherent arguments

CertHE Course Learning Outcome 5 (CHECLO5)

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

DipHE Course Learning Outcome 1 (DHECLO1)

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.

DipHE Course Learning Outcome 2 (DHECLO2)

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

DipHE Course Learning Outcome 3 (DHECLO3)

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

DipHE Course Learning Outcome 4 (DHECLO4)

Use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis

DipHE Course Learning Outcome 5 (DHECLO5)

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

DipHE Course Learning Outcome 6 (DHECLO6)

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.

Ordinary Course Learning Outcome 1 (ORDCLO1)

Demonstrate a systematic understanding of key aspects of your 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 with an appreciation of the uncertainty, ambiguity, ethical implications and limits of knowledge

Ordinary Course Learning Outcome 2 (ORDCLO2)

Demonstrate an ability to deploy accurately established techniques of analysis and enquiry within a discipline and apply the methods and technical skills that you have learned to review, consolidate, extend and apply your knowledge and understanding to solving problems in the field of study

Ordinary Course Learning Outcome 3 (ORDCLO3)

Demonstrate conceptual understanding that enables you: a) to devise and sustain arguments, and/or to solve problems, using ideas and techniques, some of which may be innovative and are at the forefront of a discipline b) to describe and comment upon particular aspects of current research, or equivalent advanced scholarship, in the discipline

Ordinary Course Learning Outcome 4 (ORDCLO4)

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 the discipline) and communicate information, ideas, problems and solutions to both specialist and non-specialist audiences using a range of different approaches

Ordinary Course Learning Outcome 5 (ORDCLO5)

Critically, and with an open mind, 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, potentially creative, solutions - to a problem

Ordinary Course Learning Outcome 6 (ORDCLO6)

Demonstrate the qualities and transferable skills necessary for employment requiring: a) the exercise of initiative and personal responsibility b) decision-making in complex and unpredictable contexts c) the ability to work as part of a team.

Honours Course Learning Outcome 1 (DEGCLO1)

Demonstrate a systematic understanding of key aspects of your 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 with an appreciation of the uncertainty, ambiguity, ethical implications and limits of knowledge

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Honours Course Learning Outcome 2 (DEGCLO2)

Demonstrate an ability to deploy accurately established techniques of analysis and enquiry within a discipline and apply the methods and technical skills that you have learned to review, consolidate, extend and apply your knowledge and understanding, to solving problems as well as to initiate and carry out an independent research project in the field of study

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Honours Course Learning Outcome 3 (DEGCLO3)

Demonstrate conceptual understanding that enables you: a) to devise and sustain arguments, and/or to solve problems, using ideas and techniques, some of which may be innovative and are at the forefront of a discipline b) to describe and comment upon particular aspects of current research, or equivalent advanced scholarship, in the discipline

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Honours Course Learning Outcome 4 (DEGCLO4)

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 the discipline) and communicate information, ideas, problems and solutions to both specialist and non-specialist audiences using a range of different approaches.

Honours Course Learning Outcome 5 (DEGCLO5)

Critically, and with an open mind, 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, potentially creative, solutions - to a problem

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Honours Course Learning Outcome 6 (DEGCLO6)

Demonstrate the qualities and transferable skills necessary for employment requiring: a) the exercise of initiative and personal responsibility b) decision-making in complex and unpredictable contexts c) the ability to work as part of a team

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Integrated Masters Course Learning Outcome 1 (IMACLO1)

Apply a range of graduate skills to investigation in pharmaceutical science

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Integrated Masters Course Learning Outcome 2 (IMACLO2)

Show competency in scientific method; its values, application and extension as applied to pharmaceutical science

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Integrated Masters Course Learning Outcome 3 (IMACLO3)

Demonstrate the ability to use a range of laboratory-based techniques

Integrated Masters Course Learning Outcome 4 (IMACLO4)

Critically evaluate modern concepts of disease and the contribution of new technologies to the treatment of disease

Integrated Masters Course Learning Outcome 5 (IMACLO5)

Synthesise and interpret new knowledge and apply it to the field of pharmaceutical science

Integrated Masters Course Learning Outcome 6 (IMACLO6)

Design, implement and evaluate scientific research in a given area of Pharmaceutical Science

Overview of Assessment:

Module	Title	Course Learning Outcomes
4BM016	Human Form & Function	CHECLO1, CHECLO2
4PY008	Introduction to Microbiology	CHECLO1, CHECLO4, CHECLO5
4PY009	Principles of Drug Action	CHECLO1, CHECLO2, CHECLO3, CHECLO4
4PY011	The Physicochemical Nature of Drugs	CHECLO1, CHECLO3, CHECLO4, CHECLO5
4PY012	Scientific Communication and Undergraduate Development	CHECLO2, CHECLO3, CHECLO4, CHECLO5
4PY013	Molecular Basis of Life	CHECLO1, CHECLO2, CHECLO3, CHECLO4, CHECLO5
5BC001	Molecular Biosciences	DHECLO1, DHECLO3, DHECLO4, DHECLO5
5PY010	Therapeutic Pharmacology	DHECLO1, DHECLO3, DHECLO5
5PY014	Principles of Drug Development and Formulation	DHECLO1, DHECLO3, DHECLO4, DHECLO5, DHECLO6
5PY015	Practical Pharmaceutical Techniques	DHECLO1, DHECLO2, DHECLO4, DHECLO5, DHECLO6
5PY017	Pharmaceutical Microbiology	DHECLO1, DHECLO3, DHECLO5
5PY023	Contemporary Drug Design	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5, DHECLO6
6BC003	Quality Assurance and Biomolecular Analysis	DEGCLO1, DEGCLO2, DEGCLO3, DEGCLO6, ORDCLO1, ORDCLO2, ORDCLO3, ORDCLO6
6PY002	Pharmaceutical Biotechnology and Molecular Biology	DEGCLO1, DEGCLO3, DEGCLO4, DEGCLO5, ORDCLO1, ORDCLO3, ORDCLO4, ORDCLO5
6PY004	Honours Project (Pharmaceutical Sciences and Pharmacology)	DEGCLO1, DEGCLO2, DEGCLO3, DEGCLO4, DEGCLO6, ORDCLO1, ORDCLO2, ORDCLO3, ORDCLO4, ORDCLO6
6PY005	Advanced Pharmaceutical Formulation	DEGCLO1, DEGCLO2, DEGCLO3, DEGCLO4, DEGCLO5, DEGCLO6, ORDCLO1, ORDCLO2, ORDCLO3, ORDCLO4, ORDCLO5, ORDCLO6
6PY006	Biochemical Pharmacology	DEGCLO1, DEGCLO3, DEGCLO4, DEGCLO5, ORDCLO1, ORDCLO3, ORDCLO4, ORDCLO5
7PY003	Pharmaceutical Analysis	IMACLO1, IMACLO2, IMACLO3, IMACLO5, IMACLO6
7PY011	Research Methods	IMACLO1, IMACLO2, IMACLO4, IMACLO5
7PY013	Pharmacoepidemiology	IMACLO1, IMACLO2, IMACLO4, IMACLO5, IMACLO6
7PY014	Strategies and Methods in Drug Discovery, Design and Development	IMACLO1, IMACLO2, IMACLO3, IMACLO4, IMACLO5, IMACLO6
7PY025	Frontiers in Pharmaceutical Sciences	IMACLO1, IMACLO2, IMACLO4, IMACLO5
7PY026	Molecular Medicine	IMACLO1, IMACLO2, IMACLO4, IMACLO5

Teaching, Learning and Assessment:

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:

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:

Students will be assigned individual tutors who will be available to discuss academic progress. Students will also be made aware of the learning support available via the learning centre. Academic study skills are embedded into the course.

Employability in the Curriculum:

Career opportunities exist with a wide range of organisations many of whom employ pharmaceutical scientists in both in the UK and further afield:

- Drug companies need pharmaceutical scientists to evaluate new drugs and contribute to the development of new products.
- Smaller chemical companies that make intermediates for the drug industry sometimes employ graduates with the necessary analytical skills and understanding of the drug development process.
- Sales teams for the major Pharma companies employ graduates to advise customers on the more technical aspects of their products.
- Opportunities exist in areas outside of the pharmaceutical industry, for example in science teaching and professions such as accountancy.
- Many graduates go on to research-focused careers and study at universities and research institutes.

THE UNIVERSITY OF OPPORTUNITY