

Overview

Programme Code	36377
Programme Title	Drug Discovery, Development and Delivery
Awarding Institution	Liverpool John Moores University
Programme Type	Masters
Language of Programme	All LJMU programmes are delivered and assessed in English
Programme Leader	Alistair Fielding
Link Tutor(s)	

Awards

Award Type	Award Description	Award Learning Outcomes
Target Award	Master of Science - MS	See Learning Outcomes Below
Alternative Exit	Postgraduate Certificate - PC	Engage with advanced levels of theories and practice in relation to the field of pharmaceutical science. Explore and test appropriate research methodologies Demonstrate appropriate levels of critical analysis, reflection and contextual awareness in focused areas of study
Alternative Exit	Postgraduate Diploma - PD	Engage with advanced levels of theory and practice in relation to the field of pharmaceutical science. Take an informed position in relation to the academic discipline and field of pharmaceutical manufacture and quality control Identify and apply appropriate research methodologies. Demonstrate personal skills in critical analysis, reflection and contextual awareness in a wide range of modules associated with the field of study.

Alternate Award Names	
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External Benchmarks

Subject Benchmark Statement	
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Programme Offering(s)

Mode of Study, Mode of Delivery	Intake Month	Teaching Institution	Programme Length
Full-Time, Face to Face	September	LJMU Taught	1 Years

Aims and Outcomes

Educational Aims of the Programme

The overall aim of the programme is to produce postgraduates who are able to play a significant role in the development of approaches to the study and application of knowledge in the field of pharmaceutical science. The curriculum and approach to Teaching, Learning and Assessment aims to meet the challenges of employment in a global society through the development of intellectual, analytical and research skills relevant to the study of DrUG-Discovery, Development and Delivery. The specific aims of the programme are: 1. To provide students with specialist knowledge of the pharmaceutical sciences pertinent to the discovery and formulation of drugs and the manufacture of pharmaceutical products. 2. To enhance students' critical, analytical and practical skills relevant to the modern multidisciplinary pharmaceutical industry. 3. To enable students to extend their capacity for independent study and to make an original contribution to research. 4. To encourage students to develop their capacity for teamwork. 5. To encourage students to improve and refine their oral and written communication skills. Alternative Target/Interim Award Learning Outcomes - Postgraduate Certificate in Pharmaceutical Sciences A student who is eligible for this award will be able to: Engage with advanced levels of theories and practice in relation to the field of pharmaceutical sciences. Explore and apply research methods relevant to the field of pharmaceutical sciences. Demonstrate appropriate levels of critical analysis, reflection and contextual awareness in the quantitative/qualitative analysis and physical-chemical properties of therapeutic ingredients. Alternative Target/Interim Award Learning Outcomes - Postgraduate Diploma in Pharmaceutical Sciences A student who is eligible for this award will be able to: Engage with advanced levels of theory and practice in relation to the field of pharmaceutical science. Take an informed position in relation to the academic discipline and field of pharmaceutical manufacture and quality control. Identify and adapt appropriate research methods to the field of drUG-discovery, development and delivery. Demonstrate personal skills in critical analysis, reflection and contextual awareness in the fields of drUG-design, development and delivery.

Learning Outcomes

Code	Description
PLO1	Critically evaluate current themes and insights at the forefront of the pharmaceutical industry and sciences.
PLO2	Use information technology to retrieve and critically evaluate information and data from a variety of sources.
PLO3	Use appropriate numerical and statistical problem-solving skills.
PLO4	Demonstrate initiative and responsibility for personal development.
PLO5	Work effectively as a member of a team.

Code	Description
PLO6	Plan projects and use appropriate time management skills.
PLO7	Select, use and adapt appropriate quantitative and qualitative techniques for the analysis of pharmaceutical ingredients and mixtures.
PLO8	Critically evaluate the physical and chemical properties of active therapeutic agents critical to the development of pharmaceutical products.
PLO9	Plan, develop, implement and critically evaluate research methods and problem-solving approaches pertinent to the discovery and development of drugs and pharmaceutical products.
PLO10	Apply specialistic knowledge, skills and techniques to the solution of problems associated to drug discovery and pharmaceutical development, including the analysis and quantification of pharmaceutical ingredients and mixtures.
PLO11	Apply and develop advanced theories and novel concepts to data processing relevant to drug discovery and pharmaceutical development.
PLO12	Interpret and present complex concepts and ideas including the outcome of scientific studies.
PLO13	Plan and execute laboratory experiments safely with understanding and application of good laboratory practice (GLP) and COSHH risk assessments.
PLO14	Plan, conduct, evaluate and report the results of scientific investigations, including the use of secondary data.

Programme Structure

Programme Structure Description

The programme is composed of six taught modules running over seven months (September - March) and a research project (April - August). All modules are assessed by a combination of coursework and/or written examinations. The PgDip (120 credits) in Pharmaceutical Sciences programme is offered as an alternative exit and is achieved via completion of six taught modules (7101PHASCI, 7102PHASCI, 7103PHASCI, 7121PHASCI, 7122PHASCI and 7123PHASCI). The PgCert in Pharmaceutical Sciences programme is offered as an alternative exit for those students completing three 20 credit modules.

Programme Structure - 180 credit points	
Level 7 - 180 credit points	
Level 7 Core - 180 credit points	CORE
[MODULE] 7101PHASCI Research Methods Approved 2022.03 - 20 credit points	
[MODULE] 7102PHASCI Analysis, Structure and Function of Therapeutic Agents Approved 2022.01 - 20 credit points	
[MODULE] 7103PHASCI Preformulation Strategies Approved 2022.01 - 20 credit points	
[MODULE] 7108PHASCI Research Project Approved 2022.01 - 60 credit points	
[MODULE] 7121PHASCI Formulation and Drug Delivery Approved 2022.01 - 20 credit points	
[MODULE] 7122PHASCI Approaches to Drug Design Approved 2022.01 - 20 credit points	
[MODULE] 7123PHASCI Product Development and Control Approved 2022.01 - 20 credit points	
Level 7 Optional - No credit points	OPTIONAL

Module specifications may be accessed at <https://proformas.ljmu.ac.uk/Default.aspx>

Teaching, Learning and Assessment

Acquisition is achieved through a combination of interactive lectures, workshops, seminars, literature reviews, extended essays, portfolios, oral presentations, directed supervisions and project work. Practical skills are achieved by practical activities, demonstrations, project work and seminars with both internal and external speakers. Testing of the knowledge base is achieved through a combination of formative VLE interactive self-assessments, summative written assignments such as laboratory reports, essays and case studies, problem solving exercises, written examinations, project reports and oral presentations. Intellectual skills are developed through the teaching and learning programme. Critical analysis and problem solving skills are embedded in all modules and are taught, developed and practised through workshops, formative assessment exercises and all forms of project work. Experimental, research and design skills are further developed and practised through a broad range of coursework activities, laboratory work and all project work. Written and/or verbal individual feedback is given on all work submitted. Critical thinking and problem solving skills are assessed via written examinations and written assignments, such as laboratory reports, essays and case studies. Experimental research and design skills are assessed in the presentation of the Research Project together with an oral defence. Practical skills are taught during laboratory sessions and project work, developed and practised throughout programme. Experimental design is taught in the Research Methods module via lectures and workshops, developed and practised in practical sessions and projects. Practical skills are assessed via laboratory reports, problem-solving exercises, research project thesis and oral presentation. Transferable skills are taught, developed and practised through the teaching and learning programme. Specialist mathematical skills are taught on specific modules, whereas basic skills are normally practised on all modules. Achievement of the learning outcomes will be assessed through written examinations, written assignments, oral presentations and formative VLE interactive self-assessments.

Entry Requirements

Type	Description
Other international requirements	Normally a good degree (70%) in chemical, biological or related sciences with a recognised English language qualification (IELTS score of 6.5 with a minimum of 6.0 in each category).
Alternative qualifications considered	Graduates: Normally entrants to the programme will have at least a lower second class degree in chemical, biological or related science.

Extra Entry Requirements