Undergraduate Programme Specification
Pharmacology

This specification provides a summary of the main features of the programme and learning outcomes that a student might reasonably be expected to achieve and demonstrate where full advantage is taken of all learning opportunities offered. Further details on the learning, teaching and assessment approach for the programme and modules can be accessed on the University website and Virtual Learning Environment, GCU Learn. All programmes of the University are subject to the University's Quality Assurance processes.

GENERAL INFORMATION				
Programme Title	Bachelor of Science with Honours in Pharmacology Bachelor of Science with Honours in Pharmacology (GCU Pathways)			
Final Award	Bachelor of Science with Honours in Pharmacology			
Awarding Body	Glasgow Caledonian University			
School	SHLS			
Department	Biological and Biomedical Sciences			
Mode of Study	Full-time			
Location of Delivery	Glasgow Campus			
UCAS Code	B210 B211 (GCU pathways)			
Accreditations (PSRB)	Royal Society of Biology			
Period of Approval	From:	September 2020	To:	August 2025

EDUCATIONAL AIMS OF PROGRAMME
The educational aim of the programme is the production of Honours graduates with specialist knowledge in pharmacology and with the appropriate knowledge, skills, attitudes and understanding to pursue a productive and satisfying career. While the programme aims to give students a thorough grounding in all aspects of pharmacology, it also includes modules that ensure a broad based experience of human biology and an appropriate knowledge of other related sciences.. This permits exit at Certificate of HE, Diploma of HE and B.Sc. in Biological Sciences. The educational aims are to: 1. Provide a detailed understanding at a theoretical and practical level of current topics in pharmacology 2. Produce graduates who have developed the skills, knowledge and opportunity to pursue careers in pharmacology 3. Produce graduates who are able to integrate theory and practice and who are critical, reflective thinkers 4. Stimulate deeper learning, critical evaluation and encourage students to take responsibility for their own learning through using a range of student-centred approaches and develop an effective learning environment. 5. Foster an ethos of career-long self-directed learning through continuous professional development 6. Encourage the development of creative and innovative thinking through a range of approaches 7. Develop further the student's ability to critically analyse published material including supportive data

8. Develop the student's ability to analyse complex scientific research
9. Foster the ability of the student to deliver effective communication of scientific knowledge to fellow professionals
10. Develop the student's ability to design and conduct an investigative project under supervision and demonstrate a critical and rigorous analysis of the data in the production of a thesis

LEARNING OUTCOMES

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills, qualities and other attributes in the following areas:

A: Knowledge and understanding;

A1 Explain the essential facts, concepts, principles and theories of the biological sciences

A2 Acquire an in-depth understanding of key advanced aspects of pharmacology through research-led discovery

A3 Understand the principles and areas of applicability of a range of research methodologies, data acquisition and data interpretation techniques

A4 Understand the principles and practice of laboratory investigations

B: Practice: Applied knowledge, skills and understanding;

B1 Competence in the practical application of a range of appropriate techniques and test measurement systems in the life sciences

B2 Show ability to interpret current thinking in terms of their significance and the underlying theory

B3 Evaluate critically research material from a variety of sources to gain a coherent understanding of theory and practice

B4 Design and carry out an experimental programme independently

B5 Develop an awareness of current scientific issues within an ethical framework whilst engaging with professional processes and practices

C: Generic cognitive skills;

C1 Ability to analyse problems and develop strategies for their solution

C2 Make a reasoned choice from a range of strategies and techniques as to which is most appropriate to solve a given problem

C3 Apply critical, creative and innovative thinking, problem solving & reflective practice to a variety of theoretical and practical situations

D: Communication, numeracy and ICT skills

D1 Use IT for communication, information retrieval and data handling

D2 Be proficient in the use of IT for accessing databases and scientific literature and in the practical application of a range of statistical, quality assurance and computational techniques used in the treatment of experimental data

D3 Communicate effectively with a wide range of individuals/stakeholders using a variety of means

E: Autonomy, accountability and working with others.

E1 Plan, conduct and accurately report on work carried out by themselves

E2 Critical discussion, evaluation and reporting of work carried out by themselves or others

E3 Ability to prepare, interpret and implement risk assessments/ethics applications and undertake safe reflective and effective laboratory procedures

E4 Utilise effective time management to organise and plan work to ensure tasks are completed and deadlines met

E5	Develop effective independent and group working skills

LEARNING AND TEACHING METHODS

The programme provides a variety of learning and teaching methods. Programme and Module specific guidance will provide detail of the learning and teaching methods specific to each module.

Across the programme the learning and teaching methods and approaches may include the following:

- Lectures
- Seminars
- Practical classes
- Placements
- Simulation experiences
- Groupwork
- Flipped classroom approaches
- Online learning

The above approaches may be delivered either in person or online as appropriate and determined at module level by the Module Leader.

ASSESSMENT METHODS

The programme provides a variety of formative and summative assessment methods. Programme and Module specific guidance will provide detail of the assessment methods specific to each module.

Across the programme the assessment methods may include the following:

- Written coursework (essays, reports, case studies, dissertation, literature review)
- Oral coursework (presentations, structured conversations)
- Practical Assessment (Placement, VIVA, Laboratory work)
- Group work
- Blogs and Wikis
- Portfolio Presentations
- Formal Examinations and Class Tests

The above assessments may be delivered either in person and online as appropriate and determined at module level by the Module Leader.

ENTRY REQUIREMENTS

Specific entry requirements for this programme can be found on the prospectus and study pages on the GCU website at this location: https://www.gcu.ac.uk/study/courses/undergraduate-pharmacology-glasgow

All students entering the programme are required to adhere to the GCU Code of Student Conduct.

PROGRAMME STRUCTURE AND AVAILABLE AND FINAL EXIT AWARDS[1]

The following modules are delivered as part of this programme:

Module Code	Module Title	Core or Optional	SCQF Level	Credit Size	Coursework %	Examination %	Practical %
M1C726395	Biological Chemistry	Core	7	40	30	70	
M1C724205	Core Skills in Biosciences 1	Core	7	40	100		P/F
M1B126370	Human Physiology	Core	7	40	30	70	
M2C726361	CORE SKILLS IN BIOSCIENCE 2	C	8	20	70	30	
M2C526397	INTRODUCTION TO MICROBIOLOGY	C	8	20	50	50	
M2C723491	MECHANISMS OF CELLULAR REGULATION	C	8	20	50	50	
M2C726393	PRACTICAL SKILLS IN BIOMOLECULAR SCIENCES	C	8	20	100		
M2C126363	FUNDAMENTAL CELL BIOLOGY	C	8	20	30	70	
M2B226357	PATHOPHYSIOLOGY FROM HEALTH TO DISEASE	C	8	20	50	50	
M3B226354	FUNDAMENTALS OF DRUG ACTION	C	9	20	40	60	
M3C723501	MOLECULAR DIAGNOSTICS	C	9	20	50	50	
M3B126380	SYSTEMATIC & CELLULAR PATHOLOGY	C	9	20	40	60	
M3C126332	CELL SIGNALLING & TRAFFICKING THERAPIES	O	9	20	30	70	
M3C926373	EXPERIMENTAL DESIGN & ANALYSIS	O	9	20	100		
M3B226388	PHARMACOLOGY OF CHEMICAL MEDIATORS	O	9	20	40	60	
M3C926378	BIOSCIENCE PLACEMENT	O	9	60	100		
MHC926371	PROJECT & WORKSHOP	C	10	40	100		
MHC726389	BIOLOGY OF DISEASE	C	10	20	30	70	
MHB226379	TRANSLATIONAL MEDICINE	C	10	20	40	60	
MHB223457	NEUROPHARMACOLOGY	C	10	20	30	70	
MHC126369	TISSUE NETWORKS & DISEASE	C	10	20	30	70	

[1] Periodically, programmes and modules may be subject to change or cancellation. Further information on this can be found on the GCU website here: www.gcu.ac.uk/currentstudents/essentials/policiesandprocedures/changesandcancellationtoprogrammes

Students undertaking the programme on a full-time basis commencing in September of each year will undertake the modules in the order presented above. This may be subject to variation for students commencing the programme at other times of year (e.g. January) and/or undertaking the programme on a part-time or distance learning mode of delivery.

The following final and early Exit Awards are available from this programme[2]:

Certificate of Higher Education in Biological Sciences- *achieved upon successful completion of 120 credits*

Diploma of Higher Education in Biological Sciences- *achieved upon successful completion of 240 credits*

Bachelor of Science in Pharmacology- *achieved upon successful completion of 360 credits*

Bachelor of Science with Honours in Pharmacology- *achieved upon successful completion of 480 credits*

ASSESSMENT REGULATIONS

Students should expect to complete their programme of study under the GCU Assessment Regulations that were in place at the commencement of their studies on that programme, unless proposed changes to University Regulations are advantageous to students. These can be found at: www.gcu.ac.uk/aboutgcu/supportservices/qualityassuranceandenhancement/regulationsandpolicies

In addition to the GCU Assessment Regulations noted above, this programme is subject to Programme Specific Regulations in line with the following approved Exceptions:

i. Carrying of failed modules into subsequent levels
GCU assessment regulations allow for the carrying of up to two failed modules into subsequent levels of the Programme. The Pharmacology programme will not normally permit this to occur. The rationale for this is that it must be ensured that necessary knowledge which underpin subsequent higher level modules have been attained by students before progressing to the next level of the programme.

ii. Compensation
Compensation of failed modules is applicable at level 2 and level 4 using the standard GCU regulation. Compensation is not allowed for L3 core modules for entry to Honours. Pharmacology core modules are defined as Fundamentals of Drug Action, Pharmacology of Chemical Mediators, Experimental Design and Analysis, and Cell Signalling and Trafficking Therapies.

[2] Please refer to the GCU Qualifications Framework for the minimum credits required for each level of award and the Programme Handbook for requirements on any specified or prohibited module combinations for each award.

VERSION CONTROL (to be completed in line with AQPP processes) **Any changes to the PSP must be recorded below by the programme team to ensure accuracy of the programme of study being offered.**			
Version Number	*Changes/Updates*	*Date Changes/Updates made*	*Date Effective From*
1.0	No substantive changes other than transfer to this template		
2.0	Exceptions to assessment regulations updated	1/6/24	1/6/24