



University of Central Lancashire

Course Handbook

BSc (Hons) Pharmacology

2019/20

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School of Pharmacy and Biomedical Sciences



Please read this Handbook in conjunction with the University's Student Handbook.

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1. Welcome to the course

Welcome to the School of Pharmacy and Biomedical Sciences within the Clinical and Biomedical Sciences Faculty at the University of Central Lancashire. We hope that you'll enjoy your studies and experiences in Preston. The Student Handbook brings together information to help you to answer queries that you might have about the course. If we have missed something that you think should be included in this Handbook then please let us know.

We want this to be a positive learning experience for you. There will be some very hard work, but we hope that you'll find it interesting and stimulating, and that you'll have the chance to enjoy yourself along the way. We believe you can succeed, and we want you to succeed. The academic and support staff are here to help you achieve that goal. Good luck!

Chris Smith
(Course leader)



1.1 Rationale, aims and learning outcomes of the course

Pharmacology brings together many medical disciplines such as physiology, biochemistry, and cell and molecular biology. This integrative approach will enable you to gain a detailed understanding of the processes involved in how the body works in health, the processes underlying disease and how drugs act to treat the patient and enable the body to function. We think this is a fascinating area to study and will produce sought-after graduates with knowledge and skills across a range of biomedical science disciplines.

1.1.1 Course aims:

- To develop knowledge and understanding of pharmacology built on a sound scientific foundation.
- To apply pharmacological knowledge and analyse and evaluate information.
- To instil an understanding of the importance of pharmacology within different contexts.
- To engage learners in a stimulating learning environment where students can achieve their potential in skills including communication, numeracy, IT, independence, and interpersonal and group working skills.
- To develop competence in the definition, implementation and monitoring of plans for self-development.
- To prepare the learner for a career in bioscience in positions requiring knowledge of human biology in relation to health, disease and treatment.

1.1.2 Learning outcomes (these are the things that you should be able to do at the end of the course)

In the category of knowledge and understanding, you should:

- Be able to explain and critically discuss the principles of pharmacology in association with the underlying physiology, pathophysiology, biochemistry and molecular biology. This will include elements where the uncertainty, ambiguity and limits of knowledge within the discipline are apparent.
- To understand and evaluate appropriate approaches available to generate and analyse data from various types of biological study
- Be able to discuss and evaluate the application of pharmacology relevant to drug use and development
- Be able to identify and discuss regulatory and ethical issues associated with pharmacology and the wider biosciences

In the category of subject specific skills, you should:

- Be able to use appropriate laboratory equipment to enable a practical study be undertaken.
- Be able to work accurately in an organised and safe manner across a range of practical methods associated with biological and pharmacological laboratory investigations.
- Be able to design experiments, and interpret and report the results of experiments relevant to pharmacology.
- To maintain a contemporaneous lab book accurately recording work undertaken in laboratory.
- To assimilate evidence and to apply it with specialist knowledge of pharmacology to new situations e.g. formulate hypothesis or predict pharmacological effect

In the category of thinking skills, you should:

- Be able to locate and appraise critically relevant published literature and extract pertinent information from such sources
- Be able to define and develop strategies for solving problems.

- Be able to analyse a range of data derived experimentally, from literature or databanks, and evaluate it critically supported by logical and structured argument.

In the category of other skills relevant to employability and personal development, you should:

- Be able to write using an appropriate scientific style.
- Be able to work as a useful contributor to a group or independently.
- Be able to use IT effectively for information retrieval, analysis, communication and presentation.
- Be able to communicate effectively to transmit ideas and conclusions.
- Be able to demonstrate planning, time-management, work to deadlines; carry out independent learning and to undertake career planning and development.

1.2 Course Team

NAME	EMAIL ADDRESS	ROOM No	Ext. No	EXPERTISE
Pete Abel	pabel@uclan.ac.uk	MB107a	5828	Haematology
Jane Alder	jealder@uclan.ac.uk	MB006	3915	Pharmacology
Tony Ashton	acashton@uclan.ac.uk	MB137	3509	Cell biology Neuroscience
Victorio Bambini (Year 2 tutor)	vbambini-junior@uclan.ac.uk	MB241	6483	Neuropharmacology Immunology
Steve Beeton	sbeeton@uclan.ac.uk	MB032	3592	Microbiology
Vassillis Beglopoulos	vbeglopoulos@uclan.ac.uk	MB138	5836	Pharmacology Neuroscience
Darrell Brooks (Year 1 tutor)	dbrooks@uclan.ac.uk	MB027	3919	Physiology
Elaine Court	encourt@uclan.ac.uk	MB136	3591	Pharmacology
Donna Daly	ddaly3@uclan.ac.uk	MB024	6480	Physiology
Colin Davidson	cdavidson2@uclan.ac.uk	MB068	3920	Pharmacology
Inma Gonzalez	mgonzalez3@uclan.ac.uk	MB137	3503	Pharmacology
Dave Griffiths	dmgriffiths2@uclan.ac.uk	MB107a	5830	Cellular pathology
Vicky Jones (Year 3 tutor)	vcjones@uclan.ac.uk	MB139	5833	Molecular and cell biology

Marta Krysmann	mkrysmann@uclan.ac.uk	MB140	3502	Chemistry
Clare Lawrence	cllawrence@uclan.ac.uk	MB064	5809	Molecular and cell biology
Frank Martin	flmartin@uclan.ac.uk	MB070	6482	Cell biology Physiology
Lorenzo More	lmore@uclan.ac.uk	MB139	5847	Pharmacology Neuroscience
David Waring				Microbiology
Andrew Shaw	Ashaw12@uclan.ac.uk	MB138	5836	Biochemistry
Lisa Shaw	lshaw1@uclan.ac.uk	MB241	5829	Cell biology Immunology
Leroy Shervington	lashervington@uclan.ac.uk	MB027	3519	Chemistry
Chris Smith (course leader)	cgssmith@uclan.ac.uk	MB139	5845	Pharmacology
Tim Snape	tjsnape@uclan.ac.uk	MB065	5805	Chemistry
Izabella Stasik	Istasik@uclan.ac.uk	MB107a	6484	Cell biology
Gail Welsby	gwelsby@uclan.ac.uk	MB107a	3501	Cell biology Pharmacology
Philip Welsby	pjwelsby@uclan.ac.uk	MB241	5823	Cell biology Pharmacology Neuroscience
Admin services				
Foster Hub	FosterHub@uclan.ac.uk	FB058		General Enquiries
Foster Hub	FosterHubattendance@uclan.ac.uk	FB058		Notification of Absence
Foster Hub	PBSExtensions@uclan.ac.uk	FB058		Extension Requests
Foster Hub	FosterEC@uclan.ac.uk	FB058		Extenuating Circumstances

1.3 Expertise of staff

The expertise of all the staff are outlined in the table above with each one carrying out research in their chosen field. This expertise is applied in taught sessions in both laboratory classes and lectures, but is most applied in the final year modules and in the research projects. All students should be taught by these staff during their time at UCLan. The specific research topics that these staff work on can be found in the specific web pages for each member of staff. Please see <https://www.uclan.ac.uk/research/> for more details.

1.4 Academic Advisor

You will be assigned an Academic Advisor who will provide additional academic support during the year. They will be the first point of call for many of the questions that you might have during the year. Your Academic Advisor will be able to help you with personal development, including developing skills in self-awareness, reflection and action planning.



1.5 Administration details

Course Administration Service provides academic administration support for students and staff and are located in the Foster Hub which opens from 8.45am until 5.15pm Monday to Thursday and until 4.00pm on Fridays. The hub can provide general assistance and advice regarding specific processes such as extenuating circumstances, extensions and appeals.

Foster Building

Forensic and Applied Sciences
Pharmacy and Biomedical Sciences
Psychology
Physical Sciences
telephone: 01772 891990/891991
email: FosterHub@uclan.ac.uk

Allen Building

Medicine
Dentistry
telephone: 01772 895566
email: AllenHub@uclan.ac.uk

Harris Building

Lancashire Law School
Humanities and the Social Sciences
Centre for Excellence in Learning and Teaching
telephone: 01772 891996/891997
email: HarrisHub@uclan.ac.uk

Computing and Technology Building

Art, Design and Fashion
Computing
Journalism, Media and Performance
Engineering
telephone: 01772 891994/891995
email: CandTHub@uclan.ac.uk

Greenbank Building

Sport and Wellbeing
Management
Business
telephone: 01772 891992/891993
email: GreenbankHub@uclan.ac.uk

Brook Building

Community, Health and Midwifery
Nursing
Health Sciences
Social Work, Care and Community

telephone: 01772 891992/891993

email: BrookHub@uclan.ac.uk

1.6 Communication



The University expects you to use your UCLan email address and check regularly for messages from staff. If you send us email messages from other addresses they risk being filtered out as potential spam and discarded unread.

Good communication is a core principle within the School of Pharmacy and Biomedical Sciences, and it is important that this underpins relationships between students and members of staff. The School has adopted principles to guide students when communicating with staff members to achieve the most effective outcomes.

1.6.1 General points

- It is important to remember that academic staff are involved in a range of activities, including teaching across a number of different courses; attending placement visits, attending meetings inside and outside the University; and carrying out scientific research. Consequently, although student emails and telephone messages are afforded a high level of priority, responses are unlikely to be instant, as staff are often not at their desk. Staff will normally try to respond to you within 48 hours, but please remember we have some part-time staff and so this may not always be possible.
- The School has a large and diverse student body with a range of different needs. At times, some student's needs are particularly pressing. In such instances, staff will prioritise responding to those students, as in any other workplace.
- School staff are committed to supporting students with their studies; however there is also an emphasis upon independent learning within the Higher Education environment. Where students run into difficulty, they are strongly encouraged to seek help from their Academic Advisor in the first instance.
- Academic and Administrative staff are not permitted to give out grades via email or on the telephone, as stated in the Academic regulations. Students can access their results via 'MyUCLan' and/or Blackboard.

Administrative staff will always do their best to help students. Students are asked to communicate with courtesy at all times. There is normally a member of administrative staff in the Foster Hub from 8.45am-5.15pm Monday to Thursday and 8.45am-4pm on Fridays.

- Communication is a two way process and it is important that students and staff work together to constantly improve communication, so that it is mutually beneficial. This will be discussed at Staff/Student liaison meetings with feedback sought from all.

1.6.2 E-mails

- Students should take care to use appropriate language in emails and are reminded of the importance of being courteous at all times. Where inappropriate language is used, for example 'text language', members of staff will politely point this out to students.
- Where staff are away from University, they will routinely use their automated email response facility, which clearly states a return date. This is important for students so that they understand when staff are on leave or working away from the University.
- Staff will normally try to respond to emails from students within 2 working days (unless they are on annual leave or are part-time teaching staff), by providing an acknowledgement of the email, even if the matter cannot immediately be resolved. However, students are politely reminded that the answer to very many queries lies in module or Student handbooks and they should consult these first to try and find an answer. This helps to ensure that students who are in genuine need of assistance will receive a prompt response.
- If students do not get a response in a timely manner, they should email the member of staff again. If there is still no response and the matter remains unresolved, students should bring this to the attention of another member of staff, such as their course leader, or head of School for an 'action request'. This colleague will then address the matter with the original member of staff.
- CC-ing in emails - Students are encouraged to send emails directly to the person from whom they want a response. Students should avoid needless copying in many staff members, as this decreases the likelihood of an efficient response and increases work for academic staff. Where other staff are cc'd into the email, it should be made clear why. eg. *I am copying in my course leader so that they are also aware of this situation.*

1.6.3 Appointments

- Tutors will make it clear how students can make an appointment with them. Many tutors publish drop in times on their doors or have contact details posted on their doors. If you wish to request an appointment with a member of staff, it is usually best to either sign up on the sheet provided on the office door or email them to request a time, clearly stating what the matter is about.
- Students will be helped to understand the different roles of staff during induction. For example, all students will have an Academic Advisor who is normally the first port of call for personal issues, and advice and guidance about progression on the course. If students need advice on module specific matters, eg resubmission of essays, they should consult module staff, not their Academic Advisor. Module leaders will publish dates of assignment workshops (where these are given) for all students at the beginning of the semester. The course leader can help on course related issues whereas the year tutor maybe able to help as regards specific issues with a particular year of the degree course.
- When students have appointments with staff, it is very important that they keep them. Where they are unable to keep them, students must let the member of staff know, out of courtesy, but also to ensure staff can manage their workload.

1.6.4 Feedback

- Feedback from teaching staff is central to the progression and development of any student. This needs to be recognised and valued as a form of communication. It is extremely important for students to take their time to understand the feedback they have received. Please seek clarification from a member of staff if you do not understand any aspect of the feedback that has been provided.

1.7 External Examiner

The University has appointed an External Examiner to your course who helps to ensure that the standards of your course are comparable to those provided at other higher education institutions in the UK. The name of this person, their position and home institution can be found below. If you wish to make contact with your External Examiner, you should do this through your Course Leader and not directly. External Examiner reports will be made available to you electronically. The School will also send a sample of student coursework to the external examiner(s) for external moderation purposes, once it has been marked and internally moderated by the course tutors. The sample will include work awarded the highest and lowest marks and awarded marks in the middle range.

External Examiner Name : Dr Lisa Lione

Position: Senior lecturer in Pharmacology.

Home institution: Dept Pharmacy, Pharmacology and PG Medicine, School of Life and Medical Sciences, University of Hertfordshire, Hatfield.

When the external examiner's report for the previous year is available it will be put onto the course site on Blackboard so that you can read it.



2. Structure of the course

Full time Provision

BSc (Hons) Pharmacology

BSc Pharmacology

Diploma of Higher Education (DipHE)

Certificate of Higher Education (CertHE)

Transferring to other Programmes

Occasionally it is the case that students who begin on one programme of study realise that they would prefer to specialise in a different area. The first year of this programme is largely common with the modules required for the Biomedical Science programme within the School. Thus with the agreement of the Course Leaders, following successful completion of the first year of the Pharmacology course, there can be the possibility for you to transfer into the second year of the Biomedical Science at the start of your second year of full-time study. If you are considering changing your programme of study, it is important that you seek advice from your Academic Advisor.

Foundation year entry

Students doing a foundation year at UCLan on a relevant course can enter into the first year of the degree programme providing they obtain 60% in their foundation year.

Foundation degree

Students studying a Foundation degree at a partner college (e.g. Burnley campus) can study the first year at this institute and then transfer to the second year at the Preston campus.

2.1 Overall structure

The module codes, titles and sizes are indicated in Section 2.2.3

2.2 Modules available

Each module is a self-contained block of learning with defined aims, learning outcomes and assessment. A standard module is worth 20 credits. It equates to the learning activity expected from one sixth of a full-time undergraduate year. Modules may be developed as half or double modules with credit allocated up to a maximum of 120 credits per module.

The full list of options indicated may not all be delivered every year, and this may depend on how many students choose that particular option. When accepting your offer of a place to study on this course, you are accepting that not all of these options will be running. At (or before) the start of each year, you will have an opportunity to discuss your

course and preferred options with your tutor. The University will do all it reasonably can to ensure that you are able to undertake your preferred options.

2.2.1 Electives available

There are no electives available on the Pharmacology degree programme.

2.2.2 Accreditation of prior learning

If you consider that you may have already achieved some of the learning outcomes of the course through previous learning, please consult your course leader and gain advice from the APL Coordinator to find out whether you can make a claim for [accreditation of prior learning](#) for part of your course.

2.2.3 Scheme of the degree programme

Year 1 (level 4)

1st Semester	BL1011 Fundamentals of Biosciences	BL1012 Essentials skills in Biosciences	BL1013 Biosciences in Practice
2nd Semester	60 credits	20 credits	40 credits

Year 2 (level 5)

1st Semester	BL2011 Bioscience Practical Skills	BL2013 Molecules to Cells	BL2016 Physiology and Pharmacology
2nd Semester	60 credits	20 credits	40 credits

Year 3 (level 6)

1st Semester	BL3022 Advanced Therapies	BL3020 Molecular Neuro- pharmacology	BL3021 Drug Development	BL3011 Research Project
2nd Semester	30 credits	30 credits	20 credits	40 credits



2.3 Course requirements

Modules will be received at the School Assessment Board at the end of the relevant semester.

Unless specifically stated in the module descriptors, you are expected to receive a pass mark of a minimum of 40% as an aggregate of coursework and examination components of any module employing a mix of these

two elements.

Students not achieving a passing module mark may be re-assessed in the deficient component(s).

2.4 Module Registration Options

Discussions about your progression through the course normally take place in February each year. It is an opportunity for you to make plans for your study over the next academic year. The course team will tell you about the various modules / combinations available and you will both agree on the most appropriate (and legal) course of study for you.

2.5 Study Time

2.5.1 Weekly timetable

A timetable will be available once you have enrolled on the programme, through the student portal.

2.5.2 Expected hours of study

Normally you will have face to face contact with a member of academic staff for 15-18 hours a week. This contact will be in the form of e.g. lectures, practicals, tutorials and workshops. The on-line timetable will have details of all the modules that you are taking in one particular academic year and can be accessed either on or off campus.

In addition, all modules have a Module Handbook and this will provide you with details of the assessment timetable. The Module Handbooks can be accessed via Blackboard [ELearn (Blackboard) portal] for each module.

The normal amount of work involved in achieving a successful outcome to your studies is to study for 10 hours per each credit you need to achieve – this includes attendance at UCLan

and time spent in private study i.e. for a 20 credit module you are expected to spend a minimum of 200 hours on this.

Each module that you take as a part of your course has as a part of the module a learning agreement that sets out how the material in the module will be delivered and details of the various learning activities. Further details can be found on the individual module descriptors.



2.5.3 Attendance Requirements

You are required to attend all timetabled learning activities for each module. Notification of illness or exceptional requests for leave of absence must be made to:

the hub email FosterHubAttendance@uclan.ac.uk or by telephoning the hub on 01772 891990 or 01772 891991.

If you do not email to report your absence, the absence will be classed as unauthorised, unless appropriate documentary evidence (e.g. a medical note) is provided.

Please note that absence for reasons other than sickness must be discussed and agreed in advance with your Course Leader or Module Tutor because they would have to authorise any absence. If you do not do this your absence will be classed as unauthorised.

For any module where you have not attended sufficient classes because of illness or other cause, you will not be penalised, provided there is acceptable documentary evidence to support the absence(s). However, if there are a significant number of absences then it is unlikely that you will have met the learning outcomes for a module(s). In this case the module assessment board may give an 'I' for the current year and you will be required to re-take the module(s) in entirety the following year. This means that any module(s) that are necessary to re-take will not be capped at the minimum pass grade.

Further details are provided in the booklet 'A Students Guide to Assessment' which you will be given a copy of and is available on Blackboard. Unauthorised absence is not acceptable and may attract academic penalties and/or other penalties.

Students who do not respond to communications concerning continuous unauthorised absence may be deemed to have withdrawn from the course. The date of withdrawal will be recorded as the last day of attendance.

Please note that in any cases of absence (authorised or otherwise) it is your responsibility to find out what material you have missed, and by negotiation with staff (and perhaps other students) to catch up with your general learning and especially the work required for assessments.

If you have not gained the required authorisation for leave of absence, do not respond to communications from the University and if you are absent for four weeks or more, you may be deemed to have withdrawn from the course. If this is the case, then the date of withdrawal will be recorded as the last day of attendance.

Each time you attend a timetabled session you will use a automatic monitoring system to register your attendance (SAM: student attendance monitoring) and this can be used to determine whether you have been attending your classes. This will involve the use of

your university card which has the electronic information about yourself encoded on this. In some cases, signing in sheets will also be employed. The University has a responsibility to keep information up to date and **you must only enter your own details on the system**. To enter any other names (by using their University card or by signing for someone else) would result in inaccurate records and be dishonest. Any student who is found to make false entries can be disciplined under the student guide to regulations.

For students from overseas and non-EU countries it is very important that you understand your responsibilities after enrolling; these are broadly defined as follows:

1. You **MUST** keep UCLan informed of your contact details at all times; it is your responsibility to inform UCLan if your contact details change. If you do change your term time address and/or phone number please inform the Foster Hub.
2. You **MUST** attend your course of study regularly; under the Points Based System (PBS), UCLan is obliged to tell UKBA if students withdraw from a course, defer or suspend their studies, or if a student fails to attend their course regularly. If your studies are sponsored by a company or government agency we may have an obligation to provide them with information about your attendance and progression.
3. You **MUST** comply fully with the working conditions of your visa.
4. You **MUST** inform UCLan immediately of any change in your personal circumstances (eg. marriage/civil partnership/cohabitation/birth of a child in the UK; change in dependant circumstances; divorce; dissolution of civil partnership).

What are the penalties for not complying with the PBS?

Penalties for failing to comply with PBS will be implemented by UKBA and may be severe and long-lasting. Penalties may include your removal from the UK and/or your exclusion from the UK for a number of years.

3. Approaches to teaching and learning

3.1 Learning and teaching methods

All School courses require you to study 120 credits in each of the three years of your course. Each module is given a credit rating which corresponds to approximately 10 hours per credit. A 20 credit module therefore would expect to include 200 hours of learning time and related activities undertaken as a part of the engagement with each module. Module Learning Plans set out in detail how this time is broken down for each module.

You should note that you will need to pass all 10 modules (or 360 credits) in order to gain a BSc Honours degree though, under exceptional circumstances, the Assessment Board does have the discretion to condone a limited number of modules, which depends on the year of study.

Throughout your course individual pieces of coursework and examinations will be marked as percentages. At the end of each semester these marks will be used to generate overall module marks, which will appear on your profile and transcript. At the

end of your course these module marks will be used to calculate an Average Percentage Mark or APM which will be used to determine your degree classification. More details on APM is provided in Section 6.1.

You should note that, whilst you must pass the first year in order to proceed to the second year of your course, the actual module marks do not count towards your overall degree classification. However, having said this, experience has shown us that students who do well in the first year have a strong foundation to go on and do perform well in subsequent years.

The School's strategy in all of its courses is to promote deep and active learning and to achieve an appropriate balance between the accumulation of subject specific knowledge, the understanding of subject-specific concepts, the application of these, and the development of generic skills. The overall strategy is for the development of transferable skills to be encouraged within all modules, with increased emphasis on independent and group work as you progress from Level 4 to Level 6. Personal development planning (PDP) and preparation for employment is encouraged throughout the course and via the Academic Advisor system, together with specific sessions related to career planning. More information is provided in Section 3.5.

The School encourages learning using a range of teaching methods to accommodate the range of preferred learning styles of the students.

Lectures are used to introduce you to new areas, define the scope of topics, communicate information, and explain concepts.

Tutorials are used to develop skills or encourage learning through the application of the concepts covered in lectures.

Seminars are used to develop communication skills, literature searching, and analysis and evaluation.

Practical sessions are employed to provide demonstrations of theory and practice and to develop practical skills. You will frequently use scientific equipment in regular use in a range of research laboratories as part of your practicals.

Group exercises are effective in developing a range of skills, including communication and working with others.

Problem-based learning is being used in an increasing number of modules to promote your active participation in determining what you need to learn.

The final-year project, undertaken by all students, is a substantial piece of work that encourages independence and self-management.

Blackboard is being used on all modules to provide a framework for the organisation of module materials, and to support your learning.

In line with the School ethos of developing you as an independent learner, at Level 4, practicals tend to be completely directed, whilst at Level 5, and particularly at Level 6, practical exercises may be more open-ended to allow the development of independence, group working and problem solving skills.

You will have an IT induction session during your first week. The University and other Schools offer a range of IT-based electives for you to develop these important skills, and

the Library Helpdesk is able to offer personal support to resolve IT-related problems. Basic IT skills (word-processing, use of email, use of library databases and simple statistical analysis) are developed during Level 4 modules. Further development of IT skills at Level 5 takes place as described below. The School subscribes to a number of electronic journals, textbooks and on-line services, and you are encouraged to utilise these as part of your studies. Students are encouraged to use IT in a variety of ways including email communication and the accessing of important materials on the School's web site or Blackboard folder.

The School has developed a common set of first year modules for all "Bioscience" courses. This is a deliberate choice on our part since it allows us to ensure that all our students benefit from the available resources and it also allows students to transfer between bioscience courses at the end of the first year.

By the end of Level 4 you will have begun to develop an understanding of the key concepts relevant to Pharmacology and will have initiated the development of a wide range of relevant skills such as communication, problem solving, data analysis and presentation. To achieve this, factual information is delivered through lectures, supported by prepared material, and the provision of lecture notes in electronic form via Blackboard. Learning and writing skills are reinforced through the use of regular assignments; these are focused on the subject matter of the relevant modules, and provide an opportunity for staff to give specific feedback on writing skills. The skills modules also focus on the development of teamwork, planning, understanding accuracy and variability, and the generation of scientific hypotheses. All students are able to word-process, use e-mail, and access the University network, as demonstrated by coursework. Effective time-management is encouraged through tutorial exercises.

Modules at Level 5 and 6 are still delivered by a mixture of teaching methods, but with an increased emphasis on input from the student. Class sessions are used more widely for problem-solving and group work. A range of other skills are developed, e.g. oral skills through discussions and oral presentations. Modules use teaching aids as deemed appropriate by the module teams. These may include videos, e.g. showing an experimental technique; CAL (computer assisted learning) packages; and printed material for problems, data manipulation and interpretation and case studies.

Within the Pharmacology course, skills in carrying out practical work are fostered through laboratory classes with workbook or practical manuals, that include the description of safe working practices. In addition to the above, you will also be asked to write laboratory reports and interpret data. This approach is important in developing the skills necessary to undertake the final year project.

Throughout your course you will have the opportunity of developing a range of practical competencies based in the area of laboratory skills. These are key employment skills and are important in ensuring that you can work accurately and efficiently when dealing with biological samples.

Students studying Bioscience undergraduate courses will study statistical and IT skills. Such modules will equip you with the necessary analytical and presentational skills to carry out Level 6 work and, in particular, the Research Project.

The School offers a variety of opportunities for placement learning across our degree schemes. For Pharmacology students the main opportunity is to undertake one of the summer internships that take place over the summer period between the academic years of your course.

The Level 6 modules are designed to provide in-depth study in selected areas. By the end of the course it is expected that you will have developed the appropriate skills to

undertake independent study; be able to demonstrate higher level cognitive skills such as evaluating information, and developing clear and consistent arguments; be able to plan, design and undertake investigative work; be able to work effectively as part of a group; to apply theory/knowledge to new situations; formulate and test hypotheses by designing experiments and applying practical techniques; analyse and evaluate data supported by logical and structured argument; and define and develop strategies for solving problems.

At each level you are expected to spend a significant amount of time in private study. At level 4 this is typically 15-20 hours per week, and reading is mainly of set texts. By level 6 as class contact time is reduced, more private study time is expected, with reading of reviews and the primary literature, some being suggested by academic staff and some found by you using the resources that are available to you through using the library.

Communication is developed through discussions and presentations; numeracy and statistics via practical work; IT through coursework; and teamwork through class work in problem-based learning, tutorials, case studies, and problem-solving. Generally class sizes are smaller for Level 6 modules, providing the opportunity for more of a 'seminar' type of approach. There is an increasing expectation that material should be prepared in advance of sessions for discussion / presentation, and that wider use is made of the primary literature.

The final-year research project at Level 6 particularly allows you to develop and demonstrate your self-organisation and planning.

The School recognises the main purposes of assessment as the diagnosis of strengths and weaknesses; encouragement to be involved in determining your own performance; and testing the achievement of the learning outcomes. Assessment is continuous and comprises both formative where the marks do not contribute to the final grade and summative where the marks do form part of the final grade. Formative assessment encourages the development of personal self-awareness and self-evaluation such that corrective change can be instigated by the individual. This formative feedback is central to the development of you as a student from a dependent to independent worker, which is at the heart of the programme philosophy. This self-assessment begins during year 1 of the programme and is particularly evident in the skills modules.

The summative assessment learning strategy in each module is designed to best test the achievement of the module learning outcomes. A range of assessment methods are utilised including short-note writing, essays, laboratory notebooks, practical exercises, data interpretation, problem solving, practical reports, presentations and examinations. Some of the above are on a group basis, and in this case there may be an element of peer assessment. The examination formats change from Level 4, where multiple choice and shorter questions are used, to Level 5 and 6 where longer, more evaluative, questions and problem solving exercises are utilized.

3.2 Study skills

The University has a study skills support facility for students called **WISER**. WISER is an acronym for the two ways in which you may wish to make use of this service.

Walk-In Study Enhancement through Review drop in, one to one **tutorial** consultations, which is available to all students during term-time. The focus is on specific and individual needs.

The university is continuously investing in various software programmes that are designed to help students with their written and mathematical skills, and some of these may be available to you if it is deemed that you need such support.

WISER: <http://www.uclan.ac.uk/students/study/wiser/index.php>



3.3 Learning resources

3.3.1 Learning Information Services (LIS)

Extensive [resources](#) are available to support your studies provided by LIS – library and IT staff. Take advantage of the free training sessions designed to enable you to gain all the skills you need for your research and study.

During term time the library is open 24 hours a day although some services will not be operating during the night. During the summer vacation the library is open from 7.30 am to 10 pm.

3.3.2 Electronic Resources

LIS provide access to a huge range of electronic resources – e-journals and databases, e-books, images and texts. In addition, the modules that form your course also have suggested e-reading lists associated with them. Further details can be found in individual module booklets.

There is also an on-line timetable that shows you your individual timetable for the modules that you are taking. You are advised to consult the timetable at the beginning of each week so that you can plan your study periods around organised teaching activities.

Much of the material that you will require to engage with the individual modules that you are taking can be found on ELearn (Blackboard). Here you can access module booklets and lecture notes. You will also be required to submit **much** of your course work on-line through the plagiarism checker Turnitin.

3.4 Personal development planning

The School's PDP programme is based around core modules and assessments rather than stand-alone modules. You are introduced to the idea of PDP and career planning through sessions in induction week, including a talk from a careers advisor or employer and meetings with your Academic Advisor. Reflection and self-assessment on your achievements and goal setting is supported by linking selected coursework to the reflection process. The course team has identified the coursework to be included in the scheme so that it covers a wide range of skills. In years 1 and 2, two pieces of coursework per year will be used as the basis for reflection. You are asked to reflect (and record your reflections) on these pieces of work both before submission and after obtaining the mark and feedback. You will have meetings with your Academic Advisor, who is responsible for discussing the reflection and notifying the module tutors that it has occurred. Reflection is encouraged by assessing its occurrence by modifying coursework marks. A bonus of up to 10% of the module mark will be given if PDP if selected coursework is reflected on and the reflection discussed with your Academic Advisor. In some cases this PDP may be given a pass or fail element for the module which means that if you do not do this then you will automatically fail the module.

You are advised to keep a progress file containing the reflections and examples of work. You are responsible for ensuring that any relevant information is included in the progress file. It is also advantageous to file returned course work so that you have a readily accessible record of the work that you have completed and the grades that you have obtained. You should also use the feedback on your coursework to inform and improve future submissions.

In the 3rd year, you will be required to produce a reflective diary and this will be

associated with the research project. In semester 1 you will be required to produce two reflections, including one after you have received comments from your supervisor on the draft Introduction for individual projects or after the presentations for Group projects. In semester 2 you will be required to produce four reflections during the research work i.e. once a fortnight and finally one reflection after you have submitted your final report.



3.5 Preparing for your career

Your future is important to us, so to make sure that you achieve your full potential whilst at university and beyond, your course has been designed with employability learning integrated into it at every level. This is not extra to your degree, but an important part of it which will help you to show future employers just how valuable your degree is. These “Employability Essentials” take you on a journey of development that will help you to write your own personal story of your time at university:

- To begin with, you will explore your identity, your likes and dislikes, the things that are important to you and what you want to get out of life.
- Later, you will investigate a range of options including jobs and work experience, postgraduate study and self-employment,
- You will then be ready to learn how to successfully tackle the recruitment process.

[Careers](#) offers a range of support for you including:-

- career and employability advice and guidance appointments
- support to find work placements, internships, voluntary opportunities, part-time employment and live projects
- workshops, seminars, modules, certificates and events to develop your skills.

Daily drop in service available from 09:00-17:00 for CV checks and initial careers information. For more information come along and visit the team (in Foster building near the main entrance) or access our careers and employability resources via the Student Portal.

In addition to the above, the School also runs a taster day for students considering postgraduate study. These are advertised on the main display screen in the School foyer.

Employability skills are embedded in all elements of the course, with potential employers involved in the design, delivery and developments of course material. To aid you in developing your employability skills you will be offered the opportunity to undertake work experience (as outlined in the UCLan advantage) and to generate a personal development plan linked to your studies. During your course you will also be invited to attend an employability week where there will be opportunity to liaise with potential employers further develop your skills in this area.

4. Student Support

We realise that for most of you it can be a daunting time when you first start at university and it maybe your first time away from home. We are sure that in the first few days at the start of

your time at the University you will make friends with people on your course and this friendship could last for much longer than the few years you will be at UCLan.



4.1 Academic Advisors

You will be assigned an Academic advisor during Induction Week. The Academic advisor will generally be a member of Academic Staff who has a good understanding of your course (and most probably who teaches a significant amount of the material on your course).

The role of the Academic advisor is to meet regularly with you and to provide a focal point for academic development, to provide individual feedback on progress, to identify areas needing improvement and discuss strategies for achieving this and to monitor attendance and progress through the course.

The Academic advisor also gives guidance to students following Assessment Boards.

The School expects undergraduate students to have at least six meetings with the Academic Advisor during Year 1, with at least three of these being 'one to one' meetings. In subsequent years, there will be at least three contacts in Year 2 and Year 3.

When appropriate, your Academic Advisor may well refer you to specialized central University support eg. WISER, and may liaise with Careers to help provide you with careers guidance.

4.2 Students with disabilities

If you have a disability that may affect your studies, please either contact the Disability Advisory Service -disability@uclan.ac.uk- or let one of the course team know as soon as possible. With your agreement information will be passed on to the Disability Advisory Service. The University will make reasonable adjustments to accommodate your needs and to provide appropriate support for you to complete your study successfully. Where necessary, you will be asked for evidence to help identify appropriate adjustments.

Assessment Arrangements are made for students who have a disability/learning difficulty for which valid supporting evidence can be made available. Contact the Disability Adviser for advice and information, disability@uclan.ac.uk

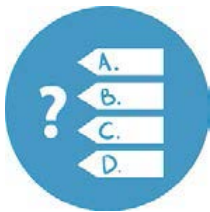
In our School, Dr Lisa Shaw is the point of contact for students with disability. Lisa's office is MB241 in Maudland building , email lshaw1@uclan.ac.uk or phone 01772 895829.

4.3 Students' Union One Stop Shop

The Opportunities Centre is the Union's One Stop Shop to find employment or volunteering whilst you study. With thousands of jobs and voluntary positions advertised, agency work through the Bridge and information on over 2000 volunteer positions within the Union.

5. Assessment

Please note that all modules will be assessed. You are expected to attempt all required assessments for each module for which you are registered, and to do so at the times scheduled unless authorised extensions, special arrangements for disability, or extenuating circumstances allow you to defer your assessment.



5.1 Assessment Strategy

The School recognises the main purposes of assessment as the diagnosis of strengths and weaknesses; encouragement to be involved in determining your own performance; and testing the achievement of the learning outcomes. Assessment is continuous and comprises formative and summative methods. Formative assessment encourages the development of personal self-awareness and self-evaluation such that corrective change can be instigated by the individual. This formative feedback is central to the development of the student from a dependent to independent worker which is at the heart of the programme philosophy. The nature of formative assessment varies between modules. In some there are short tests or essays, in others there is informal feedback via activities such as tutorials or discussion of experiment results during laboratory sessions.

The summative assessment strategy in each module is designed to best test the achievement of the module learning outcomes. A range of assessment methods are utilised including short-note writing, essays, laboratory notebooks, practical exercises, data interpretation, problem solving, practical reports, presentations and examinations. Some of the above are on a group basis, and in this case there may be an element of peer assessment. The examination formats change from Year 1, where multiple choice and shorter questions are used, to Year 2 and beyond where longer, more evaluative, questions and problem solving exercises are utilised.

Thus assessments are extremely important and you should devote sufficient time to each one and plan your work accordingly.

5.2 Notification of assignments and examination arrangements

Full details relating to the assessment of your course, (including policies on deadlines, penalties for late submission, plagiarism and feedback) can be found in the "Student's Guide to Assessment" which will be updated annually and made available to you via Blackboard.

Precise details of the timing and nature of individual assignments will be made available within individual Module Booklets, provided at the beginning of each semester. At the discretion of the Module Tutor this information may be supplemented with additional detail (including the assessment criteria – if not available in the module booklet) which will be given out during taught classes when the individual assignments are set, and well in advance of the submission date.

The marking criteria that are used to assess your work can be found in the module booklet.

5.3 Referencing

It is normal School policy to use the Harvard style of referencing. Below are a few examples, you will be given a lot more guidance in your modules.

Citing authors in the text:

Single author: The action of nicotine on neuronal receptors (Smith, 2010)

Two authors: The action of nicotine on neuronal receptors (Smith and Jones, 2010)

Three or more authors: The action of nicotine on neuronal receptors (Smith *et al.*, 2010)

Citations for a reference list:

Smith, A.A (2010) The action of nicotine on neuronal receptors. *Molecular Pharmacology* **10**, 781-791.

5.4 Confidential material

Although you are not expected to access confidential information during the course, you still need to be aware of ethical and legal responsibilities to respect confidentiality and maintain anonymity of individuals and organisations.

5.5 Cheating, plagiarism, collusion or re-presentation

Please refer to the information included in section 6.6 of the University Student Handbook for full definitions. The University uses an online Assessment Tool called Turnitin. A pseudo-Turnitin assignment will be set up using the School space on Blackboard to allow students to check as many drafts as the system allows before their final submission to the 'official' Turnitin assignment. Students are required to self-submit their own assignment on Turnitin and will be given access to the Originality Reports arising from each submission. In operating Turnitin, Schools must take steps to ensure that the University's requirement for all summative assessment to be marked anonymously is not undermined and therefore Turnitin reports should either be anonymised or considered separately from marking. Turnitin may also be used to assist with plagiarism detection and collusion, where there is suspicion about individual piece(s) of work.

In **Year 1** we tend to take a more lenient view of plagiarism and we call it poor academic practice. If a member of staff believes that you may have plagiarised you will be invited to discuss the situation. This will be to show you where you may have gone wrong to help you in the future but we will not invoke the University regulations on plagiarism. However, if a further issue of plagiarism occurs then the University regulations will apply.

The term poor academic practice constitutes 2 possibilities:

1. Where a student has copied word for word or made a minimal attempt to re-word information from a written source eg internet or book etc. without including a reference to the original source. In this case the student will be instructed to re-submit the assessment for a capped assessment mark of 40%.
2. Where a student has copied word for word or made a minimal attempt to re-word information from a written source eg internet or book etc. but has included a reference to the original source. In this case the marker may decide that there is insufficient evidence that the student understands the area and thus a mark cannot be given. In this case the student will be instructed to re-submit the assessment for a capped assessment mark of 40%.

During induction week you will be given tutorial(s) on how to use Turnitin.

The process of investigation and penalties which will be applied can be reviewed in the [Assessment Handbook](#). If an allegation is found to be proven then the appropriate penalty

will be implemented:

In the case of a single offence of cheating, plagiarism, collusion or re-presentation:

- the penalty will be 0% for the element of assessment, and an overall fail for the module.
- the plagiarised element of assessment must be resubmitted to the required standard and the mark for the module following resubmission will be restricted to the minimum pass mark (ie 40% for levels 4, 5 and 6 work, 50% for level 7 work).
- when it is detected for the first time on a resubmission for an already failed module, no further resubmission for the module will be permitted, and the appropriate fail grade will be awarded.

In the event of a repeat offence of cheating, plagiarism, collusion or re-presentation (irrespective of whether the repeat offence involves the same form of unfair means) on the same or any other module within the course:

- the appropriate penalty will be 0% for the module with no opportunity for re-assessment. This penalty does not preclude you being able to retake the module in a subsequent year.

The penalties will apply if you transfer from one UCLan course to another during your period of study and module credits gained on the former course are transferred to the current course.

Contact the [Students' Union Advice and Representation Centre](#) by emailing: suadvice@uclan.ac.uk for support and guidance.

6. Classification of Awards

The University publishes the principles underpinning the way in which awards and results are decided in [Academic Regulations](#). Decisions about the overall classification of awards are made by Assessment Boards through the application of the academic and relevant course regulations.



7. Student Feedback

You can play an important part in the process of improving the quality of this course through the feedback you give. In addition to the ongoing discussion with the course team throughout the year, there are a range of mechanisms for you to feedback about your experience of teaching and learning. We aim to respond to your feedback and let you know of our plans for improvement.

At the end of each academic year we review all our modules. During this process we take into account student views, which are discussed at Staff Student Liaison Committee meetings and also Module Evaluation Questionnaires (see below). Following the discussions at Module Review, we may decide, for example to alter the number and/or type of module coursework assessments. Alternatively we may choose to leave the module as it is for the next academic year. In addition, the Guidance support co-ordinator will meet with all Year 1 students and all course representatives twice during each academic year.

For example, for 2015-2016 academic year we introduced a new 2nd year module BL2224. This module greatly aided the student in their understanding of contemporary techniques in cell biology. This should help the student since such techniques will then not be new to the student when they may be discussed in third year modules. However, at the end of the first delivery of the module the students felt that the practical demonstrations were very useful but that they didn't need to really write an assessed laboratory book for these. Thus, for 2016-2017 we removed this assessment from the module.

7.1 Student Staff Liaison Committee meetings (SSLCs)

Details of the Protocol for the operation of SSLCs is included in section 8.2 of the University Student Handbook.

A course representative is a student who represents their fellow students' views and opinions to the course team, school, university and students' union. Course representatives work proactively and diplomatically to improve the academic and non-academic experiences of students.

The role of a course representative is extremely beneficial to both students on your course and the university. It enables students to have ownership of their student experience and voice their opinions and share positive practice with the course team, primarily the Student Staff Liaison Committee Meetings (see below).

Course representatives will be elected every year either in April or September. Alongside receiving recognition, support and respect being a course representative is a great opportunity to enhance your employability skills. If you are interested in becoming a course representative and wish to find out more about the role simply contact the [Students' Union Advice and Representation Centre](#) by emailing: coursereps@uclan.ac.uk.

School Presidents meanwhile are annually elected representatives who voice the opinions of students within each school. They communicate and engage with students in their school to gain feedback and work in partnership with senior management to create positive change. They are also trained to support and signpost course representatives where needed. If you wish to find out who is your School President or more about the role visit the [Students' Union website](#) or email: coursereps@uclan.ac.uk.

8. Appendices

8.1 Programme Specification(s)

UNIVERSITY OF CENTRAL LANCASHIRE

Programme Specification

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided.

Sources of information on the programme can be found in Section 17

1. Awarding Institution / Body	University of Central Lancashire
2. Teaching Institution and Location of Delivery	University of Central Lancashire
3. University School/Centre	School of Pharmacy and Biomedical Sciences
4. External Accreditation	N/A
5. Title of Final Award	BSc (Hons) Pharmacology
6. Modes of Attendance offered	Full time Sandwich
7a) UCAS Code	
7b) JACS Code (only required for <u>NEW</u> programmes)	B210
8. Relevant Subject Benchmarking Group(s)	Biomedical Science and Bioscience
9. Other external influences	Core curriculum in Pharmacology programmes, published by the British Pharmacological Society (BPS) Bridging the skills gap in the biopharmaceutical industry , published by the Association of British Pharmaceutical Industries (ABPI)

10. Date of production/revision of this form	August 2017
11. Aims of the Programme	
<ul style="list-style-type: none"> • To develop knowledge and understanding of pharmacology built on a sound scientific foundation. 	
<ul style="list-style-type: none"> • To apply pharmacological knowledge and analyse and evaluate information. 	
<ul style="list-style-type: none"> • To instil an understanding of the importance of pharmacology within different contexts. 	
<ul style="list-style-type: none"> • To engage learners in a stimulating learning environment where students can achieve their potential in skills including communication, numeracy, IT, independence, and interpersonal and group-working skills. 	
<ul style="list-style-type: none"> • To develop competence in the definition, implementation and monitoring of plans for self-development. 	
<ul style="list-style-type: none"> • To prepare the learner for a career in bioscience in positions requiring knowledge of human biology in relation to health, disease and treatment. 	

12. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

Students will be able to:

- A1. Explain and critically discuss the principles of pharmacology in association with the underlying physiology, pathophysiology, biochemistry and molecular biology. This will include elements where the uncertainty, ambiguity and limits of knowledge within the discipline are apparent.
- A2. Select and evaluate appropriate approaches to generate and analyse data from various types of biological study.
- A3. Discuss and evaluate the application of pharmacology relevant to drug use and development.
- A4. Identify and discuss regulatory and ethical issues associated with pharmacology and the wider biosciences.

Teaching and Learning Methods

A range of teaching and learning methods will be used to provide knowledge and develop understanding. These include lectures, practicals, IT, seminars, directed reading, problem solving exercises, case studies and discussions.

All students can access course material (course and module information, lecture notes and assessment information) via the Blackboard Virtual Learning Environment.

Assessment methods

Students will demonstrate knowledge and understanding through a combination of workbooks, short notes, essays, practical reports, summaries, data analyses, group and individual presentations and examinations. The final module mark is based on a weighted aggregate of all assignments in that module

B. Subject-specific skills

Students will be able to:

- B1. Use appropriate laboratory equipment to enable a practical study be undertaken.
- B2. Work accurately in an organised and safe manner across a range of practical methods associated with biological and pharmacological laboratory investigations.
- B3. Design experiments, and interpret and report the results of experiments relevant to pharmacology.
- B4. Maintain a contemporaneous lab book accurately recording work undertaken in laboratory.
- B5. Assimilate evidence and to apply it with specialist knowledge of pharmacology to new situations e.g. formulate hypothesis or predict pharmacological effect

Teaching and Learning Methods

A range of teaching and learning methods will be used to embed subject specific skills. These include laboratory practical work and data interpretation exercises, laboratory workbooks and notebooks, patient simulations. Safe working practices are included in all laboratory sessions, but particularly when designing experiments and in the final year research project.

Theoretical content will be explored in lectures, seminars and workshops and will allow students to discuss pharmacology-related information and place the skills within a wider scientific context.

Assessment methods

Students will demonstrate skills through a combination of laboratory competencies, laboratory notebooks and workbooks, presentations, examinations, practical reports, data analyses, case studies and a research project.

C. Thinking Skills

Students will be able to:

- C1. Locate and appraise critically relevant published literature and extract pertinent information from such sources
- C2. Define and develop strategies for solving problems.
- C3. Be able to analyse a range of data derived experimentally, from literature or databanks, and evaluate it critically supported by logical and structured argument.

Teaching and Learning Methods

A range of teaching and learning activities will be used: lectures, practical work, data interpretation exercises, PBL exercises, case studies, discussions within the group and with tutors. A final year research module will give the students the opportunity to develop their research skills, including selection and interpretative skills and mastery of using primary and secondary sources

Assessment methods

Students will demonstrate their knowledge and understanding through a combination of assessments: workbooks, short notes, essays, presentations, examinations, exams, practical reports, data analysis and in the research project. The final module mark is based on a weighted aggregate of all assignments in that module.

D. Other skills relevant to employability and personal development

Students will be able to:

- D1. Write using an appropriate scientific style.
- D2. Work as a useful contributor to a group or independently.
- D3. Use IT effectively for information retrieval, analysis, communication and presentation.
- D4. Communicate effectively to transmit ideas and conclusions.
- D5. Demonstrate planning, time-management, work to deadlines; carry out independent learning and to undertake career planning and development.

Teaching and Learning Methods

Generic skills are embedded throughout the course. Workshops introduce and develop skills in the use of appropriate IT/literature sources, databases, analytical packages, communication and presentation of data. Teamwork is built into tutorials, practical classes and workshops where students work through case studies and problem solving activities. Students are also given guidance on the development of skills via the academic advisor system.

Assessment methods
Students will demonstrate generic skills through a combination of written reports, presentations, laboratory notebooks, group and individual work and a final year research project.

13. Programme Structures*				14. Awards and Credits*
Level	Module Code	Module Title	Credit rating	
Level 6	BL3011	Research Project	40	<p>BSc (Hons) Pharmacology Requires 360 credits including a minimum of 220 at Level 5 or above and 100 at Level 6</p> <p>BSc Pharmacology Requires 320 credits including a minimum of 180 at Level 5 or above and 60 at Level 6.</p> <p>Students who also successfully complete module BL2017 will receive the award with 'Placement'.</p>
	BL3022	Advanced Therapies	30	
	BL3020	Molecular Neuropharmacology	30	
	BL3021	Drug Development	20	
Level 5*	BL2017	Optional placement year	120 (notional)	
Level 5	BL2011	Bioscience Practical Skills	60	<p>Dip. HE Physiology and Pharmacology Requires 240 credits including a minimum of 100 at Level 5 or above.</p>
	BL2013	Molecules to Cells	20	
	BL2016	Physiology and Pharmacology	40	
Level 4	BL1011	Fundamentals of Biosciences	60	<p>Cert. HE Requires 120 credits at Level 4 or above.</p>
	BL1012	Essential Skills in Biosciences	40	
	BL1013	Biosciences in Practice	20	
Level 3*	FZC005	Skills for science	20	<p>Foundation entry Students who exit after the Foundation Entry year will receive a transcript of their modules and grades.</p>
	FZC006	Biology	20	
	FZC007	Chemistry	20	
	FZC008	Biochemistry	20	
	FZC009	Mathematics	20	
	FZC010	Physics	20	
<p>* All modules are compulsory with exception of Level 3 foundation entry and Level 5 BL2017 Optional placement year.</p>				
<p>15. Personal Development Planning</p>				

The PDP programme is based around core modules and assessments rather than stand-alone modules. Students are introduced to the idea of PDP and career planning through sessions in induction week, including meetings with their academic advisor. Reflection and self-assessment on their achievements and goal setting is supported by linking selected coursework to the reflection process. Students are asked to reflect (and record their reflections) on these pieces of work both before submission and after obtaining the mark and feedback. The students have meetings with their academic advisors who are responsible for discussing the reflection and notifying the module tutors that it has occurred. Reflection is encouraged by embedding it within in the assessment requirements of selected modules (eg BL1012 Skills in Bioscience and BL3011 Research Project)

Students are advised to keep a progress file containing the reflections and examples of work. In the 3rd year, students are asked to supply to their project supervisor with examples of reflection showing achievement in a list of skills. Work on career development, CV writing etc is incorporated throughout the course and via the academic advisor system.

16. Admissions criteria *

(including agreed tariffs for entry with advanced standing)

**Correct as at date of approval. For latest information, please consult the University's website.*

112 points including Biology or Chemistry or Environmental Science or Applied Science and pass in science practical (if applicable) at A2 level and 5 GCSE passes, including maths and English at grade C or above. Other acceptable qualifications include:

- BTEC Extended Diploma in Applied Science (DDM)
- Scottish Certificate of Higher Education Higher Grade passes
- Irish Leaving Certificate Higher Grade
- International Baccalaureate 28P including grade HL5 in Biology or Chemistry
- Appropriate Access to HE Course 112 UCAS points including 15 level 3 credits with distinction in chemistry or biology
- Appropriate Foundation Course 60% or above

Students where English is not their first language need to demonstrate their ability in the English language through obtaining an IELTS score of 6.0 or above with no element below 5.5.

Applications from people with relevant work or life experience and/or non-standard qualifications are welcomed and will be considered on a case-by-case basis.

Entry to the optional Foundation route requires; DDD or above at A2 including Biology or Chemistry, BTEC ND DMM-DDM Access to HE, IB 25 - 27P including grade 5 in Biology or Chemistry.

Progression from level 3 Foundation Entry to level 4 year 1 is dependent on achieving an overall grade of 60%.

17. Key sources of information about the programme

- QAA Biomedical Science Benchmark statements
<http://www.qaa.ac.uk/en/Publications/Documents/SBS-Biomedical-sciences-15.pdf>
- British Pharmacological Society Core Curriculum
<https://www.bps.ac.uk/BPSMemberPortal/media/BPSWebsite/Assets/Curriculum-2016-A4.pdf>
- Association of British Pharmaceutical Industries www.abpi.org.uk including 2015 report "Bridging the skills gap in the biopharmaceutical industry"
http://www.abpi.org.uk/our-work/library/industry/Documents/Skills_Gap_Industry.pdf
- University/School of Pharmacy and Biomedical Sciences web sites
<https://www.uclan.ac.uk/schools/pharmacy-biomedical-sciences/index.php>
- UCAS handbooks and website
- School of Pharmacy and Biomedical Sciences brochures and student handbooks

- University prospectus

18. Curriculum Skills Map																				
Level	Module Code	Module Title	Core (C), Compulsory (COMP) or Optional (O)	Programme Learning Outcomes																
				Knowledge and understanding					Subject-specific Skills					Thinking Skills			Other skills			

				A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	D1	D2	D3	D4	D5
LEVEL 6	BL3021	Drug Development	COMP	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	
	BL3020	Molecular Neuropharmacology	COMP	y		y				y		y	y	y	y	y	y	y	y	y
	BL3019	Advanced Therapies	COMP	y		y	y					y	y	y	y	y	y	y	y	
	BL3011	Research Project	COMP	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y
LEVEL 5	BL2011	Bioscience Practical Skills	COMP	y	y	y	y	y	y	y	y		y	y	y	y	y	y	y	y
	BL2016	Physiology and Pharmacology	COMP	y	y	y		y	y	y		y	y	y	y	y	y	y	y	y
	BL2013	Molecules to Cells	COMP	y						y		y	y	y	y	y	y	y	y	y
LEVEL 4	BL1012	Essential Skills in Biosciences	COMP	y	y					y			y	y	y	y	y	y	y	y
	BL1011	Fundamentals of Biosciences	COMP	y	y	y		y	y	y	y	y	y	y	y	y	y	y	y	y
	BL1013	Biosciences in Practice	COMP	y	y	y	y	y	y		y	y	y	y	y	y	y	y	y	y

Note: Mapping to other external frameworks, e.g. professional/statutory bodies, will be included within Student Course Handbook

19. LEARNING OUTCOMES FOR EXIT AWARDS:

For **each exit award available**, list learning outcomes relating to the knowledge and understanding, subject specific skills, thinking, other skills relevant to employability and personal development that a typical student might be expected to gain as a result of successfully completing each level of a course of study.

For example a student may be able to critically analyse something by the time that they complete the target award but at diploma level they might only be able to outline it and at certificate level list.

For a standard BA/BSc (Hons) award the exit award learning outcomes for CertHE (Level 4) and DipHE (Level 5), BA/BSc (Level 6) should be included; for a postgraduate Masters, this would normally be PGDip and PGCert.

Learning outcomes for the award of:

BSc (level 6)

- A1. Explain the principles of pharmacology in association with the underlying physiology, pathophysiology, biochemistry and molecular biology.
- A2. Select and evaluate appropriate approaches to generate and analyse data from a biological study.
- A3. Discuss the application of pharmacology relevant to drug use and development.
- A4. Discuss regulatory and ethical issues associated with pharmacology and the wider biosciences
- B1. Use appropriate laboratory equipment to enable a practical study be undertaken.
- B2. Work accurately in an organised and safe manner across a range of practical methods associated with biological and pharmacological laboratory investigations.
- B3. Design and report the results of experiments relevant to pharmacology.
- B4. Maintain a contemporaneous lab book accurately recording work undertaken in laboratory.
- B5. Assimilate evidence and to apply it with knowledge of pharmacology to predict pharmacological effect
- C1. Locate and appraise relevant published literature and extract pertinent information from such sources
- C2. Define and develop strategies for solving problems.
- C3. Be able to analyse a range of data derived experimentally, from literature or databanks, and evaluate it supported by logical and structured argument.
- D1. Write using an appropriate scientific style.
- D2. Work as a useful contributor to a group or independently.
- D3. Use IT effectively for information retrieval, analysis, communication and presentation.
- D4. Communicate effectively to transmit ideas and conclusions.

D5. Demonstrate planning, time-management, work to deadlines; carry out independent learning and to undertake career planning and development.

DipHE (Level 5)

A1. Explain the principles of pharmacology.

A2. Select appropriate approaches to generate and analyse data from various types of biological study.

A3. Describe the application of pharmacology relevant to drug use and development.

A4. Identify regulatory and ethical issues associated with biosciences.

B1. Use appropriate laboratory equipment to enable a practical study be undertaken.

B2. Work accurately in an organised and safe manner in a biological or pharmacological laboratory investigation.

B3. Design and report the results of experiments relevant to pharmacology.

B4. Maintain a lab book recording work undertaken in laboratory.

B5. Apply knowledge of pharmacology to predict pharmacological effect

C1. Locate relevant published literature and extract pertinent information from such sources

C2. Define and develop strategies for solving problems.

C3. Be able to analyse a range of data derived experimentally, from literature or databanks

D1. Write using an appropriate scientific style.

D2. Work as a useful contributor to a group or independently.

D3. Use IT effectively for information retrieval, analysis, communication and presentation.

D4. Communicate to transmit ideas and conclusions.

D5. Demonstrate planning, time-management, work to deadlines; carry out independent learning and to undertake career planning and development.

Cert HE (Level 5)

A1. Explain the principles of pharmacology.

A2. Select and evaluate appropriate approaches to generate and analyse data from a biological study.

A3. Describe the process of drug development.

A4. Identify regulatory and ethical issues associated with bioscience.

B1. Use appropriate laboratory equipment to enable a practical study be undertaken.

B2. Work accurately in a safe manner in a biological and pharmacological laboratory investigation.

B3. Describe the results of experiments relevant to pharmacology.

B4. Maintain a lab book recording work undertaken in laboratory.

- B5. Apply knowledge of pharmacology to predict pharmacological effect
- C1. Locate relevant published literature and extract information from such sources
- C2. Define strategies for solving problems.
- C3. Be able to analyse data derived experimentally
- D1. Write using an appropriate scientific style.
- D2. Work as a contributor to a group or independently.
- D3. Use IT effectively for information retrieval, analysis, communication and presentation.
- D4. Communicate effectively to transmit ideas and conclusions.
- D5. Demonstrate planning, time-management, work to deadlines; carry out independent learning and to undertake career planning and development.