

Nottingham Trent University Course Specification

Basic Course Information

1.	Awarding Institution:	Nottingham Trent University
2.	School/Campus:	Science and Technology/Clifton
3.	Final Award, Course Title and Modes of Study:	BSc (Hons) Pharmacology FT, SW
4.	Normal Duration:	3 years Full Time (FT) 4 years Sandwich (SW)
5.	UCAS Code:	B212

6. Overview and general educational aims of the course

BSc (H) Pharmacology is designed to provide you with a multidisciplinary approach to the study of the action of drugs on the body. You will study the key aspects of drug action in both practical and theoretical contexts and utilise these when considering the positive and negative effects of pharmaceutical products. There is an emphasis on developing knowledge and understanding such that you acquire the skills, qualities and attributes expected by employers or for postgraduate studies and research.

Pharmacology provides you with opportunities to study the pharmacology of cells, tissues and organ systems and includes substances that are used for medicinal reasons as well as those that are used for pleasure and illicitly. We offer you high quality, modern facilities for practical work and lectures. Practical work forms a substantial proportion of learning in order to ensure that you have extensive skills for employment or research.

The course provides you with the opportunity to study pharmacology in more detail in conjunction with either physiology or neuroscience. You do this by selecting the appropriate modules at Levels 5 and 6.

This course is offered in full time mode (3 years) and sandwich mode (4 years). In the sandwich mode, you will spend year 3 of the course on a work placement for example in food standards testing. If you decide to follow this route, the Employability Team will work with you to develop your *curriculum vitae* and will help you to target your applications so that you get a placement that is right for you. You will also be assigned a Placement Tutor who will monitor your progress and visit you at the company.

New and returning students participate in a matriculation event during Welcome Week. This matriculation event is designed to facilitate getting to know one's peers, reflect on your motivations for studying at university, support transition into higher education and promote course cohesion. Re/integration events for international students, mature students, placement students are part of this event. This creates the opportunity to build international relationships with fellow peers, mentors and academics.

This named award is accredited by the Royal Society of Biology and subject to successful completion of the level 6 Research Project module. This 40 credit point module has to be passed and cannot be compensated.

7. Course outcomes

Course outcomes describe what you should know and be able to do by the end of your course if you take advantage of the opportunities for learning that we provide.

Knowledge and understanding

By the end of the course you should be able to:

1. demonstrate knowledge and understanding of the essential facts, terminology, classification systems, major concepts, principles and theories in pharmacology;
2. critically evaluate concepts in pharmacology and apply them in problem solving;
3. identify current developments in pharmacology and the applications arising out of them;
4. understand methods used to acquire, interpret and analyse pharmacological information from a variety of sources;
5. use and assess the values of a range of practical and presentation techniques and methodologies, including data analysis and use of statistics;
6. understand and appreciate complex ethical issues within the biosciences, and perceive how debate informs concerns about the quality and sustainability of life at local and international scales;
7. make appropriate and informed career management choices and be knowledgeable about entrepreneurial issues concerning pharmacology

Skills, qualities and attributes

By the end of the course you should be able to:

8. acquire, analyse, interpret, evaluate and apply data from a variety of sources;
9. develop critical skills in the interpretation of scientific knowledge and data;
10. apply scientific principles and methodologies in investigations;
11. use equipment and materials competently and demonstrate acquisition of technical skills relevant to the biological discipline;
12. communicate effectively in written, graphical and oral formats;
13. prepare and present scientific reports to professional standards;
14. apply numerical skills;
15. select, use and critically evaluate appropriate information using digital and traditional resources;
16. work independently and as part of a team, developing leadership capacity and the ability to work both autonomously and collaboratively;
17. demonstrate the skills required to plan, implement, draw conclusions, evaluate and report on a programme of research;
18. plan and prioritise effectively to manage work and time, and to reflect appropriately on your own performance.

8. Teaching and learning methods

In the great majority of modules, your teaching and learning are focused on lectures supported by practical, laboratory classes. Much of the theory introduced in lectures is consolidated through these laboratory sessions and through group seminars. Lecture material is supported through e-resources. The University Virtual Learning Environment is widely used to post summary slides of lectures, links to resources such as articles and recent research papers and information about the organisation of modules and the course.

On this course a recurring theme is how an understanding of the subject is essential to tackling the major health challenges of the 21st century. You will begin by considering the financial and environmental costs of scientific research in the pharmaceutical industry in relation to potential benefits to health and wellbeing. You are encouraged to reflect on global variation in response to drugs, as well as international differences in the costs and regulation of the drug discovery process. Global health challenges, including infectious diseases and many of the leading causes of death worldwide are addressed in increasing depth throughout the course. Throughout your course you will discuss ethical practices in the pharmaceutical industry. This is an ongoing sustainability debate that will form part of the final year pharmacology modules.

During this course you can undertake home or overseas placements. These provide you with personal intercultural learning experiences, to be shared with colleagues on your return.

Opportunities will exist for you to enhance your communication skills by writing reports in various formats, by producing posters and by giving oral presentations to your colleagues.

During your course, practical classes focus on hands-on acquisition of scientific skills in the application of key principles, concepts and methods of your choice of subject for study.

Laboratory and field sessions involve problem solving, data collection and observation. Further time is allocated to the analysis, interpretation and evaluation of your results. Seminars are used to offer a small group teaching environment often led by students' needs to review, discuss and consider aspects of taught material from either lecture or laboratory classes.

Through these activities, you will develop the capacity to undertake self-directed study and to become autonomous, independent learners. You will also be expected to carry out supplementary reading and research, which will consolidate taught material, situate your own work within wider theory and allow you to contribute knowledge to your chosen discipline.

Opportunities will exist for you to enhance your communication skills by writing reports in various formats, producing posters and giving oral presentations to your colleagues.

As your course progresses, you will assemble a Skills Portfolio, which is a complementary and highly personalised aspect to your learning experience. It provides a vehicle for you to evaluate, collate and showcase your practical and transferable skills for personal development and future employment.

You will be given support and formative feedback in course tutorial sessions at all levels. As the course progresses you will collect information for your Skills Portfolio. To ensure timely progression and achievement, at Levels 4 and 5 you will submit some portfolio evidence for summative assessment and feedback. The Skills Portfolio culminates at Level 6 in a capstone summative assessment with reflection on your work, where it contributes to the Research Project module.

You will participate in many practical, workshop and interactive sessions throughout your course and build experience in a number of key scientific and transferable competencies. Each skill is covered in several modules across a course, giving you the opportunity to continually learn, refine, and perfect your professional skills.

You will also have access to sustainable video resources promoting an inclusive learning environment.

9. **Assessment methods**

The course uses a variety of assessment methods to develop your individual strengths and to enable you to demonstrate achievement of the learning outcomes. Subject knowledge and understanding are mainly tested through tests and examinations, preparation of case studies, reports detailing practical work, oral presentations and poster defences.

Practical investigations are used to assess a range of intellectual and scientific skills. Your ability to test hypotheses, observe, collate, present, interpret and evaluate findings of an investigation is assessed through the preparation of formal scientific reports.

Your communication skills, in written and oral formats, are assessed at numerous points during the course. Scientific reports, poster presentations, essays and examinations provide opportunities to demonstrate your writing skills. Oral presentations and verbal defence of posters allow demonstration of your verbal and visual communication skills

As well as theoretical knowledge you will be required to demonstrate acquisition of practical skills. Essential practical skills will be assessed during laboratory sessions at Level 4. This assessment will contribute 25% to your Practical Techniques in Biology module, which will have to be passed to satisfy the RSB practical skills requirement for accreditation. If you have entered the course at Level 5 you will have a further opportunity to have your practical skills assessed if necessary.

As this named award is accredited by the RSB it is subject to successful completion of the level 6 Research Project module. This 40 credit point module has to be passed and cannot be compensated.

You will be given written feedback on all your assessed work to help you to develop your effectiveness as a learner and to achieve your goals.

10. **Course structure and curriculum**

Our BSc (H) Pharmacology degree is a 3-year full time or a 4-year sandwich placement course. The academic year comprises 30 weeks divided into 3 terms. Teaching and learning take place for 26 weeks with the final 4 weeks of each year being set aside for examinations. All modules on the degree are taught throughout the year, with the exception of Practical Techniques for Biology and Living Systems, which are taught in the first term of the first year, with the remaining modules being completed over terms 2 and 3.

An Honours degree is awarded when you have successfully completed 360 credit points (cp) with 120 cp at each level. An Ordinary degree is awarded if you have passed 120 cp at Level 4, 120 cp at Level 5 and a minimum of 60 cp at Level 6

A Diploma of Higher Education is awarded if you have successfully completed 120 cp at Level 4 and 120 cp at Level 5, but fewer than 60 cp at Level 6. You can be awarded a Certificate of Higher Education on successful completion of 120 cp at Level 4, but fewer than 120 cp at Level 5.

Information on awards and degree calculations can be found at https://www4.ntu.ac.uk/adq/document_uploads/quality_handbook/138197.pdf

In addition to gaining one of the awards above, you can qualify for a Diploma in Professional Practice at pass, commendation or distinction level on successful completion of a one year placement. You can also be awarded a Certificate in Professional Practice on completion of a minimum of 6 weeks on placement (for example if you have taken a part time or summer position).

The BSc (H) Pharmacology degree is modular-based and addresses key aspects of pharmacology. The modules selected on the degree are designed to meet the course learning outcomes. Modules are mainly 20 cp unless otherwise stated and classified either as core or option. At Level 4, all modules are core (compulsory). At Levels 5 and 6, most modules are core but there is an optional module at each level. This provides flexibility within the curriculum for you to specialise in either physiology or neuroscience. The structure of the curriculum is outlined below with an indication of the module status (i.e. C = core; O = option)

Level 4 (year 1)

Introduction to Biochemistry (C)
 Living Systems (C)
 Practical Techniques for Biology (C)
 Introduction to Pharmacology (C)
 Genetics and Immunology (C)
 Human Physiology (C)

Level 5 (year 2)

Pathophysiology (C)
 Pathopharmacology (C)
 Professional Skills in Pharmacology (C)
 Chemotherapy of Cancers and Infection (C)
 Drugs of Addiction and Abuse (C)

One module from:

Physiology (O)
 Neuroscience (O)

Optional one year placement supported by placement tutors and employability team

Level 6 (final year)

Research Project (40cp) (C)
 Current Topics in Pharmacology (C)
 Clinical Pharmacology (C)
 Toxicology (C)

One module from:

Current Topics in Physiology (O)
 Current Topics in Neuroscience (O)

11. **Admission to the course**

Entry requirements

For current information regarding all entry requirements for this course, please see the 'Applying' tab on the NTU course information web page.

The full UCAS entry profile for this course can be found at: <http://www.ucas.com/>

12. **Support for learning**

As a Nottingham Trent University student you will have the full support of the Academic Team in support for learning, and have full access to Student Support Services. https://www4.ntu.ac.uk/current_students/services/index.html

In addition, School-based pastoral support networks are in place to offer you guidance and advice on academic and personal issues.

At the start of your year we will welcome you with a series of events designed to introduce

(or reintroduce) you to the University and its services, fellow students and your academic team.

University Accommodation Officers will provide you with information, guidance and continuing support for example with places in halls of residence, private rented accommodation and the Landlord Approval Scheme.

From Welcome Week onwards we support progression and achievement of students from a diverse range of backgrounds. Course Tutor groups often comprise students from many places and cultures, ideal for exchanging ideas and understanding topics from multiple viewpoints. You will find that home, international and Erasmus students work together in practical classes and seminars.

Later in the course we encourage sandwich route students to take a placement year, which may be abroad or in the UK. You will be supported by the Employability team and a named academic staff supervisor.

Whilst on placement you may have collected information which could complement your final year Research Project and be discussed with respect to existing international literature. If you are doing a UK-based placement you would be expected to interpret your results within a wider, international context.

13. **Graduate destinations/employability**

There is a wide range of career opportunities or postgraduate studies which our students enter on completion of the course. Career opportunities for graduates include research and development in pharmacology in the pharmaceutical industry, universities and hospitals. Also non-laboratory based careers such as in clinical trials, regulatory affairs and marketing. Students also undertake postgraduate study or research.

14. **Course standards and quality**

We strongly value your input and ideas about your course. Its management and development is supported by a Course Committee, with staff and student course representatives. It operates to discuss matters arising, consider External Examiners' comments and review annual course reports. The Committee responds to your feedback since your voice plays a crucial role in the content and structure of your course and the way in which it is run.

Overarching responsibility for quality control lies with the School Academic Standards and Quality Committee whose remit is to provide guidance and support to academic courses.

External Examiners offer further quality control through monitoring academic standards and moderation of assessment tasks and processes.

15. **Assessment regulations**

This course is subject to the University's Common Assessment Regulations (located in its Academic Standards and Quality Handbook). Any course specific assessment features are described below:

Supplement to Common Assessment Regulations to be included post DAG

16. **Additional Information**

Collaborative partner(s):	None
Course referenced to Quality Assurance Agency for Higher Education (QAA) Benchmark Statements:	Biosciences and British Pharmacological Society
Course recognised by:	Royal Society of Biology
Date this course specification approved:	September 2018

Any additional information: