



# Programme Specification

## HUB-2019: Human Biosciences

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LU Foundation Degree in Science awarded by Lancaster University (FHEQ Level 5)

LU Bachelor of Science with Honours (Top-up) awarded by Lancaster University (FHEQ Level 6)

Programme Status: Approved | Version: 1

## Introduction

This programme specification provides a summary of the main features of the Human Biosciences programme and the learning outcomes that you as a student might reasonably be expected to achieve and demonstrate on successful completion of the programme.

Further detailed information related to this programme and the College can be found in the following resources:

- Programme Handbook
- B&FC Student Handbook
- B&FC Admissions Policy
- Work based and placement learning handbook (for foundation degrees)
- Student guide to assessment and feedback

## Key Programme Information

<b>Programme Code</b>	HUB-2019
<b>Programme Title</b>	Human Biosciences
<b>Teaching Institution</b>	Blackpool and The Fylde College
<b>Professional, Statutory and Regulatory Body (PSRB) Accreditation</b>	None
<b>UCAS Code</b>	
<b>Language of Study</b>	English
<b>Version</b>	1
<b>Approval Status</b>	Approved
<b>Approval Date</b>	25 February 2019
<b>JACS Code</b>	
<b>Programme Leader</b>	Linda Martin

## Programme Awards

<b>Award</b>	<b>Award Type</b>	<b>Level</b>	<b>Awarding Body</b>
LU Foundation Degree in Science	Foundation Degree (240 credits)	Level 5	Lancaster University
LU Bachelor of Science with Honours (Top-up)	Honours Top-up Degree (120 credits)	Level 6	Lancaster University

## Programme Overview

The Life Sciences sector is recognised by the UK Government to be a considerable influence on the UK economy and it has committed to a range of developments in new therapeutic approaches to health care such as nucleic acid based therapies, gene therapy or cell therapy. It is clear that this sector will be at the forefront of research and development in human health and disease and can offer a challenging and rewarding career. The FdSc and BSc Human Biosciences programme have been designed to cover a broad range of topic areas related to human health and disease, while developing your practical, research and employability skills. The design has been influenced through links with a range of local employers in order to ensure that the programme provides with you with the relevant opportunities to make you a highly employable graduate.

On this programme you will explore the structure and function of the human body from the

anatomical through to the molecular level, developing your skills in practical and analytical methods, as well as developing your independent research skills. You will undertake practical work in our laboratories using industry standard equipment, building your expertise towards your dissertation project in the final year. There will be opportunities to apply your knowledge in a range of relevant case studies, assessments and investigations. You may even discover the next antibiotic!

## Admission Criteria

You will need a minimum of 80 UCAS points (excluding Functional Skills) drawn from qualifications such as A-Levels (which must include Biology), a BTEC/QCF Extended Diploma in Applied Science, a 90 Credit Diploma in Applied Science or the Access to HE (to include either Human Physiology or Biology). You will also need GCSE English and Maths at grade 4 (previously grade C) or above.

## Career Options and Progression Opportunities

The programme prepares you for a range of careers and further study. You may wish to enter employment on completing the FdSc and this would normally be at a technical level for example as a laboratory technician. On graduating with a BSc there are a range of options such as research scientist, quality control technician, teaching and science communication for example. Some graduates choose to continue to study at a higher level undertaking masters and doctorate qualifications at other institutions.

## Programme Aims

### Foundation Degree

To provide graduates with the opportunity to develop the knowledge, skills and aptitudes required for a career in the life sciences

To develop graduates with knowledge and critical understanding of methods of enquiry in human biosciences and the ability to apply these in a work context

To offer the opportunity to critically evaluate data from a range of sources and be able to propose alternative methodologies or solutions.

### BSc top-up

To encourage critical engagement with the published academic literature in the field of human biosciences with a view to producing original and creative ideas including the justification of approaches taken

To develop an awareness of limitations in personal skills and attributes becoming independent in identifying appropriate steps for improvement which will contribute to lifelong learning

To encourage the development of criticality, contestability and uncertainty, in tandem with practical technical skills which enhance employability

To develop awareness of the complexity and rapidly evolving nature of the human biosciences

## Programme Learning Outcomes

### Level 5

Upon successful completion of this level, students will be able to:

1. Describe, explain and discuss key scientific principles in the field of human biosciences which are scientifically accurate.
2. Select appropriate theoretical concepts or practical techniques to solve problems and identify the most appropriate solution.
3. Generate primary data using a range of techniques, describe trends and patterns in data and discuss limitations in the quality of the data.

4. Communicate information to a range of intended audiences in a range of media.
5. Design scientific studies to achieve valid and reliable data in a manner that reflects industrial practice.
6. Reflect on and evaluate personal performance and identify realistic improvements to develop skills and attributes.
7. Manage workload, producing work at the required level meeting deadlines.

#### **Level 6**

Upon successful completion of this level, students will be able to:

8. Critically evaluate scientific data, methodologies, analyses and outcomes
9. Construct coherent arguments using information from a variety of sources and produce work which has a creative, independent and individual element.
10. Communicate complex information about human biosciences to a range of intended audiences in a range of media.
11. Critically analyse scientific data from both primary and secondary sources.

## Programme Structure

Module	Level	Credits	%	Category	Description	Length/Word Count	Grading Method
<b>Stage 1</b>							
B4SCHUB: Introduction to Academic Study (Elective)	4	20	60%	Coursework: Other	Written piece and reflection	2000	Letter Grade
			40%	Practical: Other	Case study, analysis, interpretation (1500 words) and poster presentation (15 minutes)	15	Letter Grade
BFC402-E (A): Academic and Digital Literacy in the Workplace (Science) (Apprenticeships) (Elective)	4	20	50%	Coursework: Essay	Summary of academic paper	2000	Letter Grade
			-	Coursework: Evaluative/ Reflective Report	Reflective Account	1000	Pass/Fail
			50%	Practical: Presentation	Data analysis interpretation and graphical representation. Academic poster presentation - 15 minutes	1000	Letter Grade
HUB402: Cell Biology and Genetics (Mandatory)	4	20	25%	Coursework: Report	Practical report	1500	Letter Grade
			25%	Practical: Presentation	n/a	15	Letter Grade
			50%	Coursework: Report	n/a	2000	Letter Grade
HUB403: Human Anatomy and Physiology 1 (Mandatory)	4	20	40%	Coursework: Report	n/a	2000	Letter Grade
			60%	Written Exam: Formal Written Examination	n/a	120	Percentage Grade
HUB404: Introduction to Biochemistry (Mandatory)	4	20	50%	Coursework: Report	n/a	2000	Letter Grade
			20%	Practical: Presentation	Poster	500	Letter Grade
			30%	Written Exam: Formal Written Examination	n/a	60	Percentage Grade
HUB405: Laboratory Skills (Mandatory)	4	20	20%	Coursework: Report	n/a	1000	Letter Grade
			80%	Practical: Timed Assessment	n/a	240	Percentage Grade
HUB406: Human Anatomy and Physiology 2 (Mandatory)	4	20	90%	Coursework: Report	n/a	3500	Letter Grade
			10%	Coursework: Other	Reflective account	1000	Letter Grade
<b>Stage 2</b>							
B5HUB-16: Work Based Learning (Elective)	5	20	70%	Coursework: Report	Project	3000	Letter Grade
			30%	Practical: Presentation	Poster - Critical Reflection & Target Setting	2000	Letter Grade

BFC502-E (A): Work Based Research Project (Apprenticeships) (Elective)	5	20	-	Coursework: Plan	Research Proposal	1000	Pass/Fail
			80%	Coursework: Project	Research Project	3500	Letter Grade
			20%	Practical: Presentation	Academic Poster and Presentation	750	Letter Grade
HUB501: Investigating Biochemistry (Mandatory)	5	20	10%	Coursework: Plan	Project proposal	1000	Letter Grade
			80%	Coursework: Report	Laboratory report	4000	Letter Grade
			10%	Coursework: Report	Reflective account	1000	Letter Grade
HUB502: Introduction to Human Health and Disease (Mandatory)	5	20	50%	Practical: Presentation	n/a	15	Letter Grade
			50%	Written Exam: Formal Written Examination	n/a	120	Percentage Grade
HUB503: Genetic Disease and Molecular Analysis (Mandatory)	5	20	50%	Coursework: Essay	n/a	2000	Letter Grade
			50%	Coursework: Report	n/a	2000	Letter Grade
HUB504: Diagnosing Infectious Disease (Mandatory)	5	20	70%	Coursework: Report	n/a	3000	Letter Grade
			30%	Coursework: Report	n/a	1000	Letter Grade
HUB505: Immunity and Immunotherapies (Mandatory)	5	20	45%	Coursework: Report	n/a	2000	Letter Grade
			30%	Written Exam: Formal Written Examination	n/a	60	Letter Grade
			25%	Practical: Presentation	n/a	15	Letter Grade
<b>Stage 3</b>							
HUB601: Dissertation (Mandatory)	6	40	10%	Coursework: Dissertation	Dissertation Proposal	1000	Letter Grade
			80%	Coursework: Dissertation	n/a	8000	Letter Grade
			10%	Practical: Presentation	n/a	15	Letter Grade
HUB602: Cell Signalling (Mandatory)	6	20	50%	Coursework: Essay	n/a	2000	Letter Grade
			50%	Coursework: Literature Review	n/a	2000	Letter Grade
HUB603: Biotechnology for Health (Mandatory)	6	20	75%	Written Exam: Formal Written Examination	Open book exam	240	Letter Grade
			25%	Practical: Presentation	n/a	20	Letter Grade
HUB604: Drugs and Disease (Mandatory)	6	20	50%	Written Exam: Formal Written Examination	Open book examination	120	Percentage Grade
			50%	Coursework: Case Study	n/a	2000	Letter Grade
HUB605: Research in Chronic Disease (Mandatory)	6	20	50%	Coursework: Essay	n/a	2000	Letter Grade
			50%	Coursework: Case Study	n/a	2000	Letter Grade

## **Study Workload**

The timetable is designed so that contact time is concentrated in 2-3 days to allow you to meet other commitments you might have. In that time you will undertake lectures, practical work, seminars and tutorials. The expected independent study time for each module is a minimum of 9.5 hours per week and this can be made up of a range of research tasks, e-learning and assessment work.

## **Programme Delivery: Learning and Teaching**

The programme is designed to build your knowledge and skills through the semesters and the years, with higher level skills expected as you progress. At Level 4 you are introduced to topic areas through lectures and tutor-led practical work. Moving towards Level 5 and 6 seminars become more common where you will bring your research to present and discuss in small groups. Practical work becomes more project orientated and you begin to design and plan your own investigations, working with your tutors to develop your ideas. Working in small classes, you will build your confidence and experience, applying your knowledge to solve problems in new scenarios and developing your graduate skills.

## **Programme Delivery: Assessment**

As a future scientist you may be required to investigate and report complex ideas to a range of audiences. To prepare you for that, a range of assessment types including exams, reports, essays and presentations are used. There is a mixture of exam types like traditional unseen ones, as well as open book exams where you can bring your research to the exam and there is also a practical timed assessment at Level 4. The indicative assessment schedule is provided at the start of the year so that you can plan your time to meet the deadlines and there is a balance of assessment across each semester. You will receive detailed feedback on the work that you produce which you can use to plan your development. We use formative assessment like quizzes, topic tests and mini-presentations to check your progress in each module. There is lots of support from your tutors as well as the HE Learning Mentors.

## **Programme Delivery: Work Based and Placement Learning**

At Level 5 you are required to undertake 96 hours of work placement which can give you the opportunity to experience a working environment as well as the chance to identify the skills and attributes required in the work place. There are a range of local employers which support the placement. Initial selection for these is through the tutor and a short interview takes place, prior to recommendation to the employer. Alternatively you can source a relevant placement of your choice. There is support available throughout the process from the tutor as well as the College Career Team. If an external placement can't be found then there are opportunities available within the science team, as well as a chance to work on 'live-briefs' designed by employers and undertaken in College.

## Programme Delivery: Graduate Skill Development

We encourage you to develop personally during the programme and provide a range of opportunities to develop the additional attributes that will make you a highly employable graduate. These are:

### *A commitment to lifelong learning and career development*

Personal and professional development planning is emphasised throughout the programme so that you can plan for career and skills development including post-graduate study or employment opportunities

### *Collaborative teamwork and leadership skills*

You are encouraged to work in groups to present research, design investigations and solve problems, building your communication and organisational skills

### *Personal and intellectual autonomy*

The programme encourages you to work independently and offers an element of choice in selecting topics for research, culminating in the choice of the final year dissertation project

### *Ethical, social and professional understanding*

Human Bioscience research often presents ethical and social issues which are discussed in a range of modules. We encourage you to act professionally throughout the programme and to follow guidance on professional development from professional bodies such as the Royal Society of Biology

### *Communication, information and digital literacies*

You will develop your communication skills through sharing research in a variety of ways including presentation and you will use statistical packages to analyse and share data

### *Global citizenship*

Health is a global issue and you will examine the distribution of health and disease across the globe and the factors that contribute to that. You will be encouraged to think internationally, for example about the emergence of antimicrobial resistance

### *Research, scholarship and enquiry skills*

Throughout the programme you are encouraged to begin to ask your own questions and to perform the research required to answer them, culminating in the development of your dissertation research project

### *Enterprise and entrepreneurial awareness and capabilities*

Development of your project ideas at Level 5 and 6 encourages you to think strategically to plan work, liaise with staff and develop a budget for the project, as well as to meet required deadlines

## Study Costs: Equipment Requirements

There is no need to buy any technical equipment as this will be provided. Many students purchase a laptop for use in class, however we do have a range of computer rooms to access if this is needed in the module. Some students opt to buy lab coat for practical work, however all safety equipment required is provided by the College.



## **Study Costs: Additional Costs**

There may be opportunities to undertake trips and visits during the programme. It is likely that these would be within the UK and for short periods of time. These would be offered on an entirely voluntary basis and as such would be self-funded.

## **Related Courses**

The Human Biosciences programme is distinctive within the College. It is within the Engineering and Science Curriculum Area alongside the FdSc/BSc Marine Biology degrees. The modules are all quite distinct although some facilities are shared between the two degree programmes.