Course Specification

Part A

BSc (Hons) Human Biosciences

HLSU232

Faculty of Health and Life Sciences/School of Life Sciences

Academic Year: Year 1 entrants 2021-22

Please note: This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided.

We regularly review our course content, to make it relevant and current for the benefit of our students. For these reasons, course modules may be updated.

More detailed information on the learning outcomes, content, and teaching, learning and assessment methods of each module can be found in the Module Information Directory (MID), student module guide(s) and the course handbook.

The accuracy of the information contained in this document is reviewed by the University and may be verified by the Quality Assurance Agency for Higher Education.

PART A Course Specification (Published Document)

BSc (Hons) Human Biosciences

1. Introduction

BSc Human Biosciences explores the current and emerging challenges to human health. Through this course you will be inspired, guided and empowered to better understand the scientific basis of these global health challenges and to be able to contribute towards finding solutions. Whilst advancing technology and medical knowledge has brought undoubted benefits, it has equally brought new and rapidly emerging problems. We are facing new challenges due to modern 24 hour lifestyles, the impacts of climate change and environmental pollution, emerging infectious diseases, the growing threat of antimicrobial resistance and an increasing ageing population. This course aims to equip graduates to assess and understand new scientific developments and to communicate effectively to diverse audiences, to encourage dialogue between public, academics and policy makers to advance progress towards a healthier future. These aims link with Goal 3 of the 2030 Agenda for Sustainable Development agreed by all United Nations member states, with UK Government commitments to action both at home and across the world.

The course content embraces biochemistry, molecular biology, microbiology, cell biology, genetics and human physiology. It aims to enhance understanding of how the human body functions in health and disease at the tissue, cell and molecular levels, throughout the lifespan. It draws on the research undertaken in our Faculty Research Centres including areas such as the links between diet, exercise, obesity and health, circadian rhythms and their impact on health, cancer genomics and antimicrobial resistance. The course takes an integrated approach to ensure that graduates gain clear insights into health challenges from varied scientific perspectives.

The first year of the course is shared with other biosciences courses (BSc Biomedical Science and BSc Pharmacology) and provides underpinning knowledge, laboratory and data analysis skills relevant for Human Biosciences. This shared approach allows you to appreciate a diversity of applications and roles for biosciences and to gain a broad topic understanding. In Years 2 and 3, all modules are designed specifically for Human Biosciences. In the second year of study, the course focuses on human health and disease, to understand the complexity of interactions at the molecular, cellular, organismal and inter-organismal levels in normal and disease states. You will develop your communication skills and put these into practice to engage lay audiences in scientific challenges. The final year considers global health challenges, exploring in detail both infectious and non-communicable diseases facing modern populations around the world. You will work with your colleagues on real world case studies and practical laboratory investigations. Assessments on this course are varied and include integrated case analysis, practical, presentation and written formats. The final year includes a research or communication focussed project in an area of Human Biosciences aligned to your own growing interest areas.

The course provides many opportunities to enhance your study experience. During integrated enhancement weeks scheduled each year, there are options to take part in international field trips, opportunities to improve particular skills and competencies and to explore careers options. Students who are unable to take part in international field trips will have alternative intercultural opportunities available on campus, such as extended group projects linking with field trip groups. The course also includes the option to incorporate a year of appropriate work experience, in a variety of settings, or a year of study abroad, taken between years 2 and 3. There will also be opportunities to interact with students internationally through Collaborative Online International Learning projects.

Students will benefit from the outstanding facilities in our purpose-built Science and Health building, which includes a biosciences superlab. These facilities will allow you to gain hands on experience in contemporary laboratory techniques including PCR and qPCR, cell culture and flow cytometry. You will be supported in your studies by a team of academically and professionally qualified staff, who bring their research and commercial expertise to the classroom. You will also be supported to develop professional

skills including communication, digital literacy, planning and research skills. Human Biosciences embrace some of the most rapidly changing and expanding sciences and graduates will be well equipped to enter a changing employment market where methods and logic, scientific literacy, conceptual knowledge and ability to communicate to diverse audiences will be essential. Graduates will therefore be well placed to enter a variety of career routes. These include bioscience, biotechnology and healthcare industries, university, government agency, charity-funded and commercial laboratories, educational roles and international organisations. Students may choose to extend their studies through our MSc Molecular Biology or Biotechnology courses, and thereafter progress to PhD level, or consider a postgraduate qualification such as Physician's Associate or teaching courses. The analytical, problem solving and communication skills that you will develop will also prepare you for varied non-scientific career routes and professions.

2 Available Award(s) and Modes of Study

Title of Award	Mode of attendance	UCAS Code	FHEQ Level
BSc (Hons) Human Biosciences	F/T (3 years) SW or study abroad (4 years)	C110	Level 6
BSc Human Biosciences*			
DipHE (unnamed)*			
CertHE (unnamed)*			
*available as fall back awards only			

3 Awarding Institution/Body	Coventry University
4 Collaboration	n/a
5 Teaching Institution and Location of delivery	Coventry University, Faculty of Health and Life Sciences, Coventry University Main Campus
6 Internal Approval/Review Dates	Date of latest review: Nov 2019 Date for next review: Academic year 2028/29
7 Course Accredited by	n/a
8 Accreditation Date and Duration	n/a
9 QAA Subject Benchmark Statement(s) and/or other external factors	The course meets the following QAA Subject Benchmark Statement: Biosciences (Oct 2019). For subject specific knowledge, sections entitled "Molecular aspects of biology (including biochemistry)" apply (Sections 7.10 and 7.11). https://www.qaa.ac.uk/quality-code/subject-benchmark-statements?indexCatalogue=document-search&searchQuery=biosciences&wordsMode=AllWords The course design is based on the Royal Society of Biology (RSB) accreditation requirements.

	https://www.rsb.org.uk/education/accreditation/Degree-Accreditation
10 Date of Course Specification	October 2019
11 Course Director	Dr Jamie Beddow

12 Outline and Educational Aims of the Course

The educational aims of the course are to:

- Develop in students an understanding of the cellular and molecular basis of human health and disease throughout the lifespan.
- Enable students to develop skills and strategies to apply their knowledge to address and effectively communicate .global challenges in human health and disease, in a fast advancing scientific and technical environment.
- Provide a stimulating learning experience that encourages an inquisitive approach to enable students to become lifelong learners in their professional discipline.
- Provide supervised opportunities for development of contemporary laboratory skills and competencies, including data analysis and interpretation.
- Provide opportunities for students to plan and carry out a research-based project, and to develop the associated skills of time and resource management, independent and team-based working and problem solving.
- Provide enriching experiences that support and enhance the academic curriculum, to allow students to develop their potential to contribute to the worldwide scientific community.
- Ensure that students are aware of, and can work within, the ethical and professional codes of conduct expected of a life scientist.

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13 Course Learning Outcomes

On successful completion of the course a student will be able to:

1. Critically analyse, interpret and synthesise information from a variety of sources applied to the understanding of the cellular and molecular basis of human health and disease and current global health challenges.
2. Assess problems from different perspectives and dissect a problem into its key features to solve it using appropriate methods.
3. Understand, analyse and present numerical data using appropriate statistical programmes and presentation techniques.
4. Perform a wide range of regularly used laboratory techniques competently, with due regard to health and safety, appropriate experimental design and data recording.
5. Communicate human biosciences topics appropriately to a variety of audiences, using a range of formats and approaches, including digital media.
6. Design, plan, implement, analyse and report a research-based project, including ethical considerations.
7. Demonstrate skills such as time-management, initiative and creativity, organisational and knowledge transfer skills, necessary for independent life-long learning in a global environment.
8. Collaborate and work with others, recognising and respecting the views and perspectives of others.
9. Evaluate and reflect on their own performance as an individual and team member and evaluate the performance of others.

14 Course Structure and Requirements, Levels, Modules, Credits and Awards

BSc (Hons) Human Biosciences is available as a 3-year full time course, or a 4-year Sandwich course option incorporating either a work experience placement or a study year abroad. All modules are mandatory, apart from those associated with the optional Sandwich year. Modules within the course, their status (whether mandatory or optional), the level of study, and their credit value are identified in Table 1.

Table 1. BSc Hons Human Biosciences Course Structure

Credit level	**Module Code**	**Title**	**Credit Value (Learning Credits)**	**Credit Value (Assess-ment Credits)**	**Mandatory/ Optional**	**Course Learning Outcomes**
Semester 1						
4	4024BMS	Human Physiology from Cells to Systems	20	20	M	1, 2, 4, 5
4	4025BMS	Genotype to Phenotype	20	20	M	1,2,3,5,7,8,9
4	4026BMS	Structure, Function and Analysis of Biomolecules	20	20	M	1,2,3,4,5
4	4027BMS	Academic and Professional Development for Life Sciences	0	0	M	9
Semester 2						
4	4028BMS	Enzymes and Metabolism	10	10	M	1,2,3,4,5
4	4029BMS	The Microbial World	20	20	M	1,2,3,4,5
	4030BMS	Drugs, Receptors and Responses	10	10	M	1,2,3,5
	4031BMS	Professional Practice for Life Scientists	10	10	M	
4	**Add+Van tage**		10	10	M	
Semester 1						
5	5048BMS	Human Physiology: Health and Homeostasis	20	15	M	1-5, 7, 8
5	5049BMS	Microorganisms in Human Health and Disease	20	15	M	1, 2, 4
5	5050BMS	Human Genetic Diversity	10	10	M	1, 4, 5, 8
5	5051BMS	Gut Microbiota in Human Health and Disease	0	10	M	3,4,5,7,9
5	**Add+Van tage**		10	10	M	
Semester 2						
5	5053BMS	Neurophysiology	10	10	M	1,2,3,5,6,8
5	5054BMS	The Immune System in Health and Disease	20	20	M	1,2,3,5,7
5	5052BMS	Modern Lifestyles, Health and Disease	20	20	M	1,2,3,5,7
	5055BMS	Group Research Project	10	10	M	1,2,3,4,5,7,8 ,9
Sandwich Year:						
5	5001BMS	Professional Experience Placement Year	0	0	O	7,9
5	5002BMS	Enhancement Year	0	0	O	7,9
Semester 1						
6	6050BMS	Metabolic Non-Communicable Disease	20	15	M	1,2,3,4,5,7,8
6	6051BMS	Infectious Disease: Present and Future Challenges	20	15	M	1,2,5
6	6053BMS	Research Design for Human Biosciences	10	10	M	1,2,5,6
6	6052BMS	Multimorbidity: An Emerging Health Challenge	0	10	M	1,2,5
6	**Add+Van tage**		10	10	M	
Semester 2						

6	6054BMS	Biology of Human Ageing	20	20	M	1,2,5
6	6055BMS	Genomics, Disease and Personalised Therapy	20	20	M	1,2,3,5,7,8,9
6	6056BMS	Independent Project in Human Biosciences	20	20	M	1,2,3,5,6,7

Modules are designed based on the academic content and competency criteria required for RSB accredited courses. They are informed by the subject specific knowledge, understanding and skills specified by the QAA Benchmark Statement.

Year 1 modules provide the key framework of skills and knowledge relevant to Human Biosciences. This includes a firm understanding of core areas of modern biosciences, from the cellular and molecular level through to whole body anatomy and physiology. These subjects are underpinned by relevant aspects of chemistry, maths and data analysis. The topics are taught in an integrated manner to ensure that the links between disciplines such as biochemistry, physiology and pharmacology are evident. Students are supported to become confident, competent and safe in the laboratory. Individual professional development activities enable students to identify strategies and approaches to enhance their own capabilities and to build their professional profile in preparation for successful placement application, and ultimately for careers after graduation.

In Year 2, students will explore in more depth the cellular and molecular mechanisms underlying the healthy state in humans and the processes that can cause disruption and disease. Students continue to extend their skills and competencies including effective communication to diverse and non-scientific audiences. The integrative approach to the course is exemplified by an assessment which draws on learning from different modules. The group based project also enhances research and scientific communication skills.

On successful completion of Years 1 and 2, students may elect to apply for either a one year work experience placement, or a year of study abroad. These opportunities offer highly valued opportunities to enhance learning and gain a competitive advantage in the workplace after graduation. Students taking this option will take an additional year to complete their degree. Students taking the work experience option enrol on 5001BMS (Professional Experience Placement) and those who opt for the study year abroad enrol on 5002BMS (Enhancement Year). These modules must be passed for this Sandwich year to be recognised. Work Experience placements are competitive and successful acceptance cannot be guaranteed. Our Faculty employability advice team offer support for students in the application process. Students should note that some work placements may require additional health and professional suitability checks including criminal record checking via DBS. If students are unable to meet the health and suitability requirements, then the choice of placement opportunities will be restricted.

Year 3 focusses on consideration of the major and emerging problems in human health, again providing an integrated approach in which learning from different modules contributes towards overarching assessment. Students also plan, implement and independently report a project in a discipline area of their choice, providing a capstone experience to the course.

Each year of the course also includes an Add+Vantage module. The Add+Vantage scheme is designed to enhance students' skills and competencies for employment. Modules offered within this scheme are varied and students can choose from options in enterprise, business, marketing, languages, academic skills, voluntary work and other areas that enhance employability.

Further details of the Add+Vantage scheme are available at:

https://share.coventry.ac.uk/students/Add-vantage/Pages/NewHome.aspx

Progression to subsequent stages of the degree is subject to University Regulations, mode E

The criteria for awards and their classification follow the general academic regulations (mode E) of the University.

For award of BSc Hons Human Biosciences the project module 6056BMS must be included in the classification calculation.

Students who fail to meet the criteria for the award for which they are registered maybe considered for an alternative award. Fall back awards are BSc Human Biosciences (non Honours), DipHE (unnamed) and Cert HE (unnamed). Conditions for these awards are detailed in the University Regulations Mode E.

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15 Criteria for Admission and Selection Procedure

UCAS entry profiles may be found by searching for the relevant course on the UCAS website, then clicking on 'Entry profile'.

Applicants should normally meet the entry requirements of the course as detailed on our University website:

https://www.coventry.ac.uk/study-at-coventry/course-search/

Non-standard applicants will be considered for entry to the course and admission will be at the discretion of the Course Director and the Admission Tutor.

Recognition for prior learning (RPL) or prior experiential learning (RPEL) may be granted for modules at the discretion of the Course Director providing that adequate evidence of learning is submitted by the student in accordance with University guidelines. RPL/RPEL will be limited to the maximum specified in University Regulations.

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16 Academic Regulations and Regulations of Assessment

This Course conforms to the standard University Academic Regulations Undergraduate Mode E

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17 Indicators of Quality Enhancement

The Course is managed by the School of Life Sciences Board of Study of the Faculty of Health and Life Sciences.

The Progression and Awards Board (PAB) for Biomolecular Sciences is responsible for considering the progress of all students and making awards in accordance with both the University and course-specific regulations.

The assurance of the quality of modules is the responsibility of the Boards of Study which contribute modules to the course.

External Examiners have the opportunity to moderate all assessment tasks and a sample of assessed work for each module. They will report annually on the course and/or constituent modules and their views are considered as part of the Course Quality Enhancement Monitoring (CQEM). Details of the CQEM process can be found on the Registry's web site.

Students are represented on the Student Forum, Board of Study and Faculty/School Board, all of which normally meet at least two or three times per year.

Student views are also sought through module and course evaluation questionnaires.

The following are key indicators of quality and standards:

- The course has been designed in accordance with the QAA Quality Code for Higher Education (May 2018), and the relevant QAA Subject Benchmark Statement (Biosciences October 2019)
- The course has been mapped to the educational standards and competencies specified by the Royal Society of Biology (RSB) for accreditation of undergraduate degrees.
- The academic team are specialists within their subject discipline. Academic staff are encouraged to take a post-graduate qualification in higher education teaching to qualify as Associate Fellows, Fellows and Senior Fellows of the Higher Education Academy (HEA)
- Many staff are active members of the RSB and other professional bodies.
- Many staff are actively involved in research within the Faculty Research Centre for Sport, Exercise and Life Sciences (CSELS).
- The QAA's review of higher education undertaken in February 2015 confirmed that Coventry University meets UK expectations in:
    - the setting and maintenance of the academic standards of its awards;
    - the quality of student learning opportunities;
    - the quality of the information about learning opportunities;
    - the enhancement of student learning opportunities.
- The University was Awarded Gold Standard in the Teaching Excellence Framework (TEF)

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18 Additional Information

Enrolled students have access to additional, key sources of information about the course and student support including,

Faculty/School Handbook

Student Handbook

Module Information Directory

Maths and Statistics Support (SIGMA)

Centre for Academic Writing (CAW)

Library Support including designated Subject Librarian

Virtual Learning Environment

Employability support services

24 hour IT support
