

Course Specification

Published Date:	23-Sep-2019
Produced By:	Oliver Jones
Status:	Validated

Core Information

Awarding Body / Institution:	University of Wolverhampton		
School / Institute:	Wolverhampton School of Sciences		
Course Code(s):	AB011K23UV	Sandwich	4 Years
UCAS Code:	C121		
Course Title:	BSc (Hons) Biological Sciences with Sandwich Placement		
Hierarchy of Awards:	Bachelor of Science with Honours Biological Sciences, having satisfactorily completed a sandwich placement Bachelor of Science with Honours Biological Sciences Bachelor of Science Biological Sciences, having satisfactorily completed a sandwich placement Diploma of Higher Education Applied Sciences Certificate of Higher Education Applied Sciences University Statement of Credit University Statement of Credit		
Language of Study:	English		
Date of DAG approval:	25/Sep/2017		
Last Review:	2017/8		
Course Specification valid from:	2010/1		
Course Specification valid to:	2023/4		

Academic Staff

Course Leader:	Dr Roy Protheroe
Head of Department:	Georgina Manning

Course Information

Location of Delivery:	University of Wolverhampton
Category of Partnership:	Not delivered in partnership
Teaching Institution:	University of Wolverhampton
Open / Closed Course:	This course is open to all suitably qualified candidates.

Entry Requirements:

Entry requirements are subject to regular review. The entry requirements applicable to a particular academic year will be published on the University website (and externally as appropriate e.g. UCAS)

2017 Entry

- A-Level minimum BB or CDD to include a Science subject preferably Biology
- Access to Higher Education Diploma requires 60 credits overall, 45 credits at Level 3 to include at least 18 Science credits at Merit.
- BTEC QCF Level 3 Extended Diploma in Applied Science grade MMP or BTEC National Diploma grade DM.
- Applicants will normally be expected to hold GCSE English and Maths at grade C+/4 or equivalent
- If you've got other qualifications or relevant experience, please contact [The Gateway](#) for further advice before applying.
- International entry requirements and application guidance can be found [here](#)

Other Requirements

An offer of a place will not be made until you have attended a formal interview.

Those who do not meet the entry requirements may be offered an alternative course

Distinctive Features of the Course:

The emphasis throughout the course will be on the applied nature of the study of biology in terms of how fundamental knowledge can be applied to tangible vocational situations and problems, together with the acquisition of practical and generic skills.

The intention of this approach will be to prepare students for their chosen career in any of the varied career options made available by a degree in Applied Biological Sciences.

To achieve this the award is structured to enable challenges to apply information effectively, to work in teams, to gain actual industrial experience, to learn from the experiences of professionals, to acquire technical competence and to develop generic and time management skills.

A placement can be undertaken anywhere; local, national or even, in some instances, international. During a placement, you will be doing similar work to a normal employee of the organisation giving you a unique insight into your chosen profession or sector, the opportunity to acquire crucial personal skills and also the opportunity to build a network of useful contacts. Many companies that employ graduates use placement programmes as a method of recruitment so you could be fast tracked into employment or onto one of their graduate schemes if you impress them.

The team at [The Workplace](#) constantly search for new placement opportunities but if you find an opportunity that interests you or you have been successful in securing one yourself, contact them for further information and support.

Educational Aims of the Course:

Biology is a vast and endlessly fascinating area – this course provides an in-depth education in the molecular cellular and genetic activities of micro-organisms, plants and animals.

With an emphasis on the applied aspects of the subject area, the course integrates technical, practical, problem solving and career relevant aspects of the award. Technical competence is an important aspect of the award hence you will be provided with ample opportunity to undertake hands-on experiments and computer based exercises which not only underpin theory, but also provide technical training.

Integrated throughout the course at all levels are transferable skills which range from written and oral communication to career and time management, together with numeracy and scientific writing. These skills will assist your studies and are valued by employers.

The award is technically supported by a full range of analytical equipment for the analysis of biological materials and for the investigation of microorganisms, plants and animals.

Intakes:

September

Major Source of Funding:

Office for Students (OFS)

Tuition Fees:

Tuition fees are reviewed on an annual basis. The fees applicable to a particular academic year will be published on the University website.

Year	Status	Mode	Amount
2017/8	H	Full Time / Sandwich	£9250.00
2017/8	EU	Full Time / Sandwich	£9250.00
2017/8	Overseas	Full Time / Sandwich	£11475.00
2018/9	H	Full Time / Sandwich	£9250.00
2018/9	EU	Full Time / Sandwich	£9250.00
2018/9	Overseas	Full Time / Sandwich	£11700.00
2019/0	H	Full Time / Sandwich	£9250.00
2019/0	EU	Full Time / Sandwich	£9250.00
2019/0	Overseas	Full Time / Sandwich	£12000
2020/1	H	Full Time / Sandwich	£9250.00
2020/1	EU	Full Time / Sandwich	£9250.00
2020/1	Overseas	Full Time / Sandwich	£12250.00

PSRB:

None

Course Structure:

September (Sandwich)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 1

Module	Title	Credits	Period	Type
4BC003	Cell Biology and Genetics	20	SEM1	Core
4AB023	Introduction to Biosciences	20	SEM1	Core
4BM024	Introduction to Microbiology	20	SEM2	Core

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

If you would like to study a Human Biology route through the course choose 4BM016 in Semester 1 and 4BM017 and 4BM023 in Semester 2.

If you would like to study an Animal/Conservation route through the course choose 4AB010 in Semester 1 and 4AB026 and 4AB014 in Semester 2.

If you would like to study a Whole organism or Molecular route through the course choose 4BC005 in Semester 1 and 4AB026 and 4BM017 in Semester 2.

4BC005	Biochemistry for Life Science	20	SEM1	
4AB010	Animal Behaviour	20	SEM1	
4BM016	Human Form & Function	20	SEM1	

For this option group you must choose a minimum of 40 credits and a maximum of 40 credits

4AB026	Introduction to Plant Biology	20	SEM2	
4AB014	Ecology	20	SEM2	
4BM023	Human Biology Practicals	20	SEM2	
4BM017	Biomedical Basis of Disease	20	SEM2	

September (Sandwich)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 2

Module	Title	Credits	Period	Type
5BC001	Molecular Biosciences	20	SEM1	Core
5BC005	Molecular Biosciences Practical Techniques	20	SEM1	Core
5AB031	Cellular and Organismal Biosciences	20	SEM2	Core

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

If you would like to study a Human Biology route through the course choose 5BM048 in Semester 1 and 5BM046 and 5BM061 in Semester 2.

If you would like to study an Animal/Conservation route through the course choose 5AB010 or 5AB009 in Semester 1 and 5AB015 in Semester 2.

If you would like to study a Whole organism or Molecular route through the course choose 5BM048 in Semester 1 and 5BM061 in Semester 2.

5BM048	Anatomy and Physiology	20	SEM1
5AB009	Conservation Biology	20	SEM1
5AB010	Animal Behaviour and Captivity	20	SEM1

For this option group you must choose a minimum of 40 credits and a maximum of 40 credits

5AB030	Analytical Techniques in Biosciences	20	SEM2
5AB015	Behavioural Ecology	20	SEM2
5BM046	Human Physiology Practicals	20	SEM2
5BM061	Evolution & Development	20	SEM2

Continuing students will follow the programme indicated below:

September (Sandwich)

Year 2

Module	Title	Credits	Period	Type
5BC001	Molecular Biosciences	20	SEM1	Core
5BC003	Molecular Biosciences Practical Techniques	20	SEM1	Core
5AB008	Cellular and Organismal Biosciences	20	SEM2	Core
5AB012	Analytical Techniques in Biosciences	20	SEM2	Core

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

5BC002	Proteins	20	SEM1	
5AB009	Conservation Biology	20	SEM1	
5AB015	Behavioural Ecology	20	SEM1	
5WL001	Basic Language	20	SEM1	
5WL002	Elementary Language	20	SEM1	

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

5AB010	Animal Behaviour and Captivity	20	SEM2	
5BM012	Evolution and Origin of Life	20	SEM2	
5WL001	Basic Language	20	SEM2	
5WL002	Elementary Language	20	SEM2	

September (Sandwich)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 3

Module	Title	Credits	Period	Type
5AB017	Sandwich Placement	40	YEAR	Core

Continuing students will follow the programme indicated below:

September (Sandwich)

Year 3

Module	Title	Credits	Period	Type
5AB017	Sandwich Placement	40	YEAR	Core

September (Sandwich)

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Year 4

Module	Title	Credits	Period	Type
6AB020	Honours Project (Biosciences)	40	YEAR	Core
6BC012	Advanced Topics in Biological Sciences	20	SEM1	Core
6AB028	Plant Biotechnology	20	SEM2	Core

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

If you would like to study a Human Biology route through the course choose 6BM017 in Semester 1 and 6BM043 and 6BM052 in Semester 2.

If you would like to study an Animal/Conservation route through the course choose 6AB008 in Semester 1 and 6BC009 in Semester 2.

If you would like to study a Whole organism or Molecular route through the course choose 6AB023 in Semester 1 and two from 6AB025, 6BC007 or 6BC009 in Semester 2.

6AB023	Microbial Biotechnology	20	SEM1
6BM017	Advanced Human Physiology	20	SEM1
6AB008	Conservation of Aquatic Vertebrates	20	SEM1

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

6BM043	Applied Physiology	20	SEM2
6AB025	Medical Microbiology	20	SEM2
6BC007	Advanced Molecular Genetics	20	SEM2
6BC009	Developmental Biology	20	SEM2
6BM052	Pathophysiology of Disease	20	SEM2

Continuing students will follow the programme indicated below:

September (Sandwich)

Year 4

Module	Title	Credits	Period	Type
6AB003	Honours Project in Biological and Forensic Sciences	40	YEAR	Core
6AB001	Microbial Biotechnology	20	SEM1	Core
6AB002	Plant Biotechnology	20	SEM2	Core

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

6BM015	Human Development	20	SEM1
6AB005	Independent Study in Biological and Forensic Sciences	20	SEM1
6AB008	Conservation of Aquatic Vertebrates	20	SEM1
6BC002	Gene Manipulation and Bioinformatics	20	SEM1
6WL001	Intermediate/Advanced Language	20	SEM1
6WL002	Elementary Language	20	SEM1

For this option group you must choose a minimum of 20 credits and a maximum of 20 credits

6BM010	Medical Microbiology	20	SEM2
6BM016	Human Evolution	20	SEM2
6AB005	Independent Study in Biological and Forensic Sciences	20	SEM2
6WL001	Intermediate/Advanced Language	20	SEM2
6WL002	Elementary Language	20	SEM2

Learning, Teaching and Assessment

Academic Regulations Exemption:

None

Reference Points:

QAA Subject Benchmark Statement – Biosciences (2007).

Learning Outcomes:

CertHE Course Learning Outcome 1 (CHECLO1)

"Demonstrate knowledge of the underlying concepts and principles associated with your area(s) of study, and an ability to evaluate and interpret these within the context of that area of study"

CertHE Course Learning Outcome 2 (CHECLO2)

"Demonstrate an ability to present, evaluate and interpret qualitative and quantitative data, in order to develop lines of argument and make sound judgements in accordance with basic theories and concepts of your subject(s) of study."

CertHE Course Learning Outcome 3 (CHECLO3)

Evaluate the appropriateness of different approaches to solving problems related to your area(s) of study and/or work

CertHE Course Learning Outcome 4 (CHECLO4)

"Communicate the results of your study/work accurately and reliably, and with structured and coherent arguments"

CertHE Course Learning Outcome 5 (CHECLO5)

Demonstrate the qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility

DipHE Course Learning Outcome 1 (DHECLO1)

"Demonstrate knowledge and critical understanding of the well-established principles of your area(s) of study, and of the way in which those principles have developed with an understanding of the limits of your knowledge, and how this influences analyses and interpretations based on that knowledge."

DipHE Course Learning Outcome 2 (DHECLO2)

"Demonstrate the ability to apply underlying concepts and principles outside the context in which they were first studied, including, where appropriate, the application of those principles in an employment context"

DipHE Course Learning Outcome 3 (DHECLO3)

"Demonstrate knowledge of the main methods of enquiry in the subject(s) relevant to the named award, and ability to evaluate critically the appropriateness of different approaches to solving problems in the field of study"

DipHE Course Learning Outcome 4 (DHECLO4)

"Use a range of established techniques to initiate and undertake critical analysis of information, and to propose solutions to problems arising from that analysis"

DipHE Course Learning Outcome 5 (DHECLO5)

"Effectively communicate information, arguments and analysis in a variety of forms to specialist and non-specialist audiences, and deploy key techniques of the discipline effectively"

DipHE Course Learning Outcome 6 (DHECLO6)

"Demonstrate the qualities and transferable skills necessary for employment, requiring the exercise of personal responsibility and decision-making and undertake further training, developing existing skills and acquire new competences that will enable them to assume significant responsibility within organisations"

Ordinary Degree Course Learning Outcome 1 (ORDCLO1)

Demonstrate an understanding of the biological relationships between the structure and activity of biomolecules and genetic organisation with the form and function of living organisms

Ordinary Degree Course Learning Outcome 2 (ORDCLO2)

"Perform molecular, cellular and biochemical techniques relevant to the study of biology, including microorganisms, plants and animal cells"

Ordinary Degree Course Learning Outcome 3 (ORDCLO3)

"Participate in the development of biology, to initiate theories, gather and formulate scientific information, reliably collate and analyse data, apply appropriate statistical tests, debate and draw conclusions"

Ordinary Degree Course Learning Outcome 4 (ORDCLO4)

"Use knowledge acquired to understand conservation and ecology, animal biology and genetics, together with microbiological applications in industry, including where appropriate social and ethical considerations"

Honours Degree Course Learning Outcome 1 (DEGCLO1)

Demonstrate an understanding of the biological relationships between the structure and activity of biomolecules and genetic organisation with the form and function of living organisms

Honours Degree Course Learning Outcome 2 (DEGCLO2)

"Perform molecular, cellular and biochemical techniques relevant to the study of biology, including microorganisms, plants and animal cells"

Honours Degree Course Learning Outcome 3 (DEGCLO3)

"Participate in the development of biology, to initiate theories, gather and formulate scientific information, reliably collate and analyse data, apply appropriate statistical tests, debate and draw conclusions"

Honours Degree Course Learning Outcome 4 (DEGCLO4)

"Use knowledge acquired to understand conservation and ecology, animal biology and genetics, together with microbiological applications in industry, including where appropriate social and ethical considerations"

Overview of Assessment:

Module	Title	Course Learning Outcomes
4AB010	Animal Behaviour	CHECLO1, CHECLO2, CHECLO3, CHECLO4
4AB014	Ecology	CHECLO1, CHECLO2, CHECLO3, CHECLO4
4AB023	Introduction to Biosciences	CHECLO1, CHECLO2, CHECLO3, CHECLO4, CHECLO5
4AB026	Introduction to Plant Biology	CHECLO1, CHECLO2, CHECLO3, CHECLO4
4BC003	Cell Biology and Genetics	CHECLO1, CHECLO2, CHECLO3, CHECLO4
4BC005	Biochemistry for Life Science	CHECLO1, CHECLO2, CHECLO3, CHECLO4
4BM016	Human Form & Function	CHECLO1, CHECLO2, CHECLO3, CHECLO4
4BM017	Biomedical Basis of Disease	CHECLO1, CHECLO2, CHECLO3, CHECLO4
4BM023	Human Biology Practicals	CHECLO1, CHECLO2, CHECLO3, CHECLO4

Module ID	Module Title	Course Learning Outcomes
4BM024	Introduction to Microbiology	CHECLO1, CHECLO2, CHECLO3, CHECLO4
5AB008	Cellular and Organismal Biosciences	DHECLO1, DHECLO2, DHECLO5, DHECLO6
5AB009	Conservation Biology	DHECLO1, DHECLO2, DHECLO5, DHECLO6
5AB010	Animal Behaviour and Captivity	DHECLO1, DHECLO2, DHECLO5, DHECLO6
5AB012	Analytical Techniques in Biosciences	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5, DHECLO6
5AB015	Behavioural Ecology	DHECLO1, DHECLO2, DHECLO5, DHECLO6
5AB017	Sandwich Placement	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5, DHECLO6
5AB030	Analytical Techniques in Biosciences	DHECLO1, DHECLO2, DHECLO5, DHECLO6
5AB032	Biochemistry	DHECLO1, DHECLO2, DHECLO5, DHECLO6
5BC001	Molecular Biosciences	DHECLO1, DHECLO2, DHECLO5, DHECLO6
5BC002	Proteins	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5, DHECLO6
5BC003	Molecular Biosciences Practical Techniques	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5, DHECLO6
5BC005	Molecular Biosciences Practical Techniques	DHECLO3, DHECLO4
5BM011	Nutrition and Metabolism	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5
5BM012	Evolution and Origin of Life	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5, DHECLO6
5BM013	Physiology Practicals and Research Methods	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5, DHECLO6
5BM031	Biomedical Science Sandwich Placement	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5
5BM046	Human Physiology Practicals	DHECLO3, DHECLO4
5BM048	Anatomy and Physiology	DHECLO1, DHECLO2, DHECLO5, DHECLO6
5BM061	Evolution & Development	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5, DHECLO6
5FS002	Forensic Biology & Anthropology (FB I.I)	DHECLO1, DHECLO2, DHECLO3, DHECLO4, DHECLO5, DHECLO6
6AB001	Microbial Biotechnology	DEGCLO3, DEGCLO4, ORDCLO3, ORDCLO4
6AB002	Plant Biotechnology	DEGCLO1, DEGCLO2, DEGCLO4, ORDCLO1, ORDCLO2, ORDCLO4
6AB003	Honours Project in Biological and Forensic Sciences	DEGCLO2, DEGCLO3, DEGCLO4, ORDCLO2, ORDCLO3, ORDCLO4
6AB005	Independent Study in Biological and Forensic Sciences	DEGCLO1, DEGCLO3, DEGCLO4, ORDCLO1, ORDCLO3, ORDCLO4
6AB008	Conservation of Aquatic Vertebrates	DEGCLO2, DEGCLO3, DEGCLO4, ORDCLO2, ORDCLO3, ORDCLO4
6AB020	Honours Project (Biosciences)	DEGCLO5
6AB023	Microbial Biotechnology	DEGCLO1, DEGCLO3, DEGCLO4, ORDCLO1, ORDCLO3, ORDCLO4
6AB028	Plant Biotechnology	DEGCLO1, DEGCLO4, ORDCLO1, ORDCLO4
6BC002	Gene Manipulation and Bioinformatics	DEGCLO1, DEGCLO4, ORDCLO1, ORDCLO4
6BC006	Bioinformatics	DEGCLO1, DEGCLO2, DEGCLO3, ORDCLO1, ORDCLO2, ORDCLO3
6BC009	Developmental Biology	DEGCLO1, DEGCLO2, DEGCLO3, ORDCLO1, ORDCLO2, ORDCLO3
6BC012	Advanced Topics in Biological Sciences	DEGCLO1, DEGCLO2, DEGCLO3, DEGCLO4, ORDCLO1, ORDCLO2, ORDCLO3, ORDCLO4
6BM010	Medical Microbiology	DEGCLO2, DEGCLO4, ORDCLO2, ORDCLO4
6BM015	Human Development	DEGCLO1, DEGCLO2, DEGCLO3, DEGCLO4, ORDCLO1, ORDCLO2, ORDCLO3, ORDCLO4

Module Title	Course Learning Outcomes
6BM016 Human Evolution	DEGCLO1, DEGCLO4, ORDCLO1, ORDCLO4
6BM017 Advanced Human Physiology	DEGCLO1, DEGCLO2, DEGCLO3, DEGCLO4, ORDCLO1, ORDCLO2, ORDCLO3, ORDCLO4
6BM043 Applied Physiology	DEGCLO1, DEGCLO2, DEGCLO3, ORDCLO1, ORDCLO2, ORDCLO3
6BM052 Pathophysiology of Disease	DEGCLO1, DEGCLO2, DEGCLO3, ORDCLO1, ORDCLO2, ORDCLO3

Teaching, Learning and Assessment:

The award will include a diverse range and variety of learning activities. These may include lectures, tutorials, seminars, practicals, discussion and work experiences.

Information central to a module will be principally delivered by lectures with a proportion through directed e-learning. Fundamental principles will be reinforced and given applied relevance by case studies within tutorials and seminars.

Increasingly, problem based exercises will be used to enable the application of knowledge to actual situations. Group working will be encouraged both within formal sessions and on-line.

Practical skills will be undertaken and practiced to increasing levels of independence from the use of elementary equipment, to more advanced skills development and ultimately to the independent final year project as students progress through the course.

Vocational experience and relevance will be promoted by the Work Experience module, Sandwich Placement and the use within modules of presentations by guest speakers with vocational specialism to emphasise the applied relevance of module content.

Digital literacy: This will be central to most activities. This will range from module organisation, familiarisation with core module content, literature searching, data analysis with interpretation and production of various forms of assessed work (including essays, posters, visual aids and practical reports) for formative and summative submission. Assessed work is increasingly submitted, marked and made available for feedback electronically.

Knowledge and Enterprising: The use of problem based teaching and application of information will enable an appreciation of fundamental knowledge and how principles can be put to use. These approaches enable the development of enterprising mechanisms for solving problems. Students will be encouraged to seek placement and to gain industrial experience which will require enterprise in job seeking.

Global Citizens: Throughout the course students will be given the opportunity to consider case studies and real life situations which will be drawn not only from UK examples but also worldwide, to give an international perspective.

Student Support:

A well established system of proven effectiveness will exist for student support throughout the course. Students will have readily accessible (made possible via the SAMS appointment system) separate personal and award tutors to give guidance and assistance with course and module related problems as necessary.

Academic skills will be introduced initially by the Biosciences Skills module which runs throughout the first year to provide a foundation in literature searching, data collection, statistical analysis and scientific presentation, including writing, referencing and oral presentation. The skills module will support both generic and practical skills which will be used on related modules during the year.

These skills will then be developed throughout modules with specific emphasis on particular skills for example group working (4AB012), practical competence (5BC003 and (5AB007/5AB012), preparation for project (5AB012) case studies (6AB005) and oral presentation (6AB003).

Development of skills will be assisted by workshops and formative assessment exercises to prepare for

summative assessment with timely and constructive feedback from assessed work to foster experiential learning.

Employability in the Curriculum:

With a degree in Biological Sciences a student would be eligible to apply for a number of career options, including employment or further higher education

A degree in Biological Sciences opens a variety of employment opportunities. With a knowledge of biological systems and having acquired transferable skills and technical competence, a range of career paths become available. Science related employment in technology based companies, whether multinational or smaller enterprises in biotechnology, agricultural, pharmaceutical and government agencies are all potential avenues. Food manufacturing and water companies require employees to undertake varied responsibilities such as quality assurance and the development and production of new products.

Options to study aspects of human and animal biology lead to a consideration of employment in biomedicine or animal welfare and conservation.

The broad scope of the award accommodates non-scientific careers and consequently teaching, retail, marketing and management are all realistic options.

For further higher education, MSc programmes such as Applied Microbiology and Biotechnology or Biotechnology at UofW or research to PhD, would be viable options.



THE UNIVERSITY OF OPPORTUNITY