

Course Specification

Published Date:	29-Jun-2022
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Core Information

Awarding Body / Institution:	University of Wolverhampton		
School / Institute:	Wolverhampton School of Sciences		
Course Code(s):	BC004K23UV	Sandwich	4 Years
UCAS Code:	C4C8		
Course Title:	BSc (Hons) Genetics and Molecular Biology with Sandwich Placement		
Hierarchy of Awards:	Bachelor of Science with Honours Genetics and Molecular Biology Bachelor of Science with Honours Genetics and Molecular Biology, having satisfactorily completed a sandwich placement Bachelor of Science Genetics and Molecular Biology with Sandwich placement Genetics and Molecular Biology, having satisfactorily completed a sandwich placement Genetics and Molecular Biology, having satisfactorily completed a sandwich placement 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 Matthew Conner
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 of BB or CDD to include a science based subject.
- Access to Higher Education Diploma requires 60 credits overall, 45 credits at Level 3 to include at least 18 Science credits at Merit.
- BTEC 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](#)
- Successful completion of the [International Foundation Year in Science and Engineering](#) guarantees entry on to this course

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:

Our Genetics and Molecular Biology graduates have excellent job prospects.

Students have the opportunity to study via sandwich mode, taking a placement between the second and third years. The research undertaken can contribute towards your Honours project.

The skills you acquire, along with the reference from an industrial supervisor can be a big advantage in securing employment upon graduation.

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:

This course aims to:

- Develop your knowledge and understanding of the underlying theories of genetics and molecular biology. It will also provide practical experience of the major analytical techniques used in genetics and molecular biology, including bioinformatics.
- Equip you with the appropriate subject-specific knowledge and transferable skills for a wide range of careers in the research, industrial, health, educational, and academic sectors.
- Enable you to develop your skills in scientific and critical thinking and to study independently.
- In addition, if you choose to undertake a sandwich degree, the course will enable you to acquire technical skills in the workplace and integrate the knowledge gained from the theoretical aspects of the course into the professional work environment.

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
2020/1	Home / EU	Full Time / Sandwich	£9250.00
2020/1	Overseas	Full Time / Sandwich	£12250.00
2021/2	H	Full Time / Sandwich	£9250.00
2021/2	Overseas	Full Time / Sandwich	£13450.00
2022/3	H	Full Time / Sandwich	£9250.00
2022/3	Overseas	Full Time / Sandwich	£13950.00

PSRB:

BC004K23UV (Sandwich)

Professional Accreditation Body:
Royal Society of Biology

Accrediting Body:
Royal Society of Biology

Accreditation Statement:

"Accredited by the Royal Society of Biology for the purpose of meeting, in part, the academic and experience requirement of membership and Chartered Biologist (CBiol)."

Approved	Start	Expected End	Renewal
01/Jul/2020	01/Jul/2020		30/Jun/2025

Course Structure:

September (Sandwich)

Module	Title	Credits	Period	Type
4AB023	Introduction to Biosciences	20	SEM1	Core
4BC005	Biochemistry for Life Science	20	SEM1	Core
4BC003	Cell Biology and Genetics	20	SEM1	Core
4AB026	Introduction to Plant Biology	20	SEM2	Core
4BC004	Introduction to Molecular Genetics	20	SEM2	Core
4BM024	Introduction to Microbiology	20	SEM2	Core

September (Sandwich)

Module	Title	Credits	Period	Type
5AB032	Biochemistry	20	SEM1	Core
5BC001	Molecular Biosciences	20	SEM1	Core
5BC005	Molecular Biosciences Practical Techniques	20	SEM1	Core
5AB031	Cellular and Organismal Biosciences	20	SEM2	Core
5AB033	Biochemical Assay Techniques	20	SEM2	Core

Group 01 | Min Value: 20 | Max Value: 20

5BM061	Evolution & Development	20	SEM2	
5BM044	Principles of Disease Investigation in Genetics and Genomics	20	SEM2	

September (Sandwich)

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

September (Sandwich)

Module	Title	Credits	Period	Type
6AB020	Honours Project (Biosciences)	40	YEAR	Core
6BC006	Bioinformatics	20	SEM1	Core
6BC012	Advanced Topics in Biological Sciences	20	SEM1	Core
6BC009	Developmental Biology	20	SEM2	Core
6BC007	Advanced Molecular Genetics	20	SEM2	Core

Please note: Optional modules might not run every year, the course team will decide on an annual basis which options will be running, based on student demand and academic factors, to create the best learning experience.

Learning, Teaching and Assessment

Academic Regulations Exemption:

AFRSC/17/22.4.4 - BSc (Hons) Biological Sciences/BSc (Hons) Genetics and Molecular Biology/BSc (Hons) Biochemistry/BSc (Hons) Microbiology and Biotechnology.

Section 1.2.5 - Exemption to permit less than 33% differentiation between cognate Biosciences honours degrees.

APPROVED (17/5/2018).

Reference Points:

This course refers to the [QAA Bioscience subject benchmark](#)

Equality Act 2010

Overview of Assessment:

Learning Outcomes

Modules

BHONS01 Explain concepts and technologies that are appropriate to the corpus of knowledge expected of a genetics and molecular biology graduate.

BHONS02 Think clearly, with a sound knowledge of the issues surrounding the central role of genetics and molecular biology in all aspects life science.

BHONS03 Utilise your skills to discover information for yourself and critically analyse, review and evaluate this in the light of your subject knowledge.

BHONS04 Safely utilise a range of analytical techniques that are directly related to the needs of your future workplace role.

BHONS05 Undertake independent study in an aspect of genetics and molecular biology utilising a range of appropriate information resources and investigative tools.

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Teaching, Learning and Assessment:

Learning activities are focused on moving towards student-centred learning from a more tutor-centred approach. Thus level 4 modules tend to involve tutor-led sessions, with defined student directed activities, whereas level 6 modules are more student-centred, with tutors acting to facilitate students' learning. Students will be presented with theoretical information in lecture sessions and then will use workshops, group tutorials, seminars, on-line forums, electronic tutorials, directed reading and a range of IT-based activities and formative assessments to develop these concepts. Practical skills will similarly be developed through the course. Level 4 practicals will be directed towards developing basic laboratory skills, which are put into context at level 5. At level 6, students will be expected to employ the practical skills they have learned in a research project in their area of interest.

The Development of Graduate Attributes

Global Citizenship

Throughout the course, students will consider the role genetics and molecular biology plays in the broader context of society. An important aspect of the course is the development of an understanding of professional practice and ethics in genetics and molecular biology. This will be developed in particular through the modules 'Molecular Basis of Life' at level 4, 'Evolution and Origin of Life' at level 5 and both 'Human Evolution' and 'Advanced Topics in Molecular Bioscience' at level 6. Professional practice and ethics are key concepts in many professions, and while specific details may vary, the understanding of the principles of professional

practice and professional ethics is eminently transferable into many different fields.

Digital Literacy

Throughout the course students will use a range of standard and specialist software to prepare and present reports, assignments, presentations, etc across a wide range of modules, with increasing sophistication. Students will be introduced to ePDPs and start their individual e-portfolio using PebblePad. Students will be expected to make use of CANVAS for accessing module information, submitting assignments, engaging in module forums, etc. Students will be expected to make use of email for module and other University communications. By the end of the course, students should be comfortable with and competent in the digital world, and have the flexibility to adapt to a wide range of digital activities.

Knowledgeable and Enterprising

The course develops students' knowledge base and skills in Genetics and Molecular Biology through all the subject specific module content. In addition, the development of transferable skills improves and enhances employability beyond the field of genetics and molecular biology, and indeed science in general. The emphasis on the students moving to a student centred learning approach also fosters the development of transferrable skills. Students are required to reflect upon their learning experience and to extrapolate from this the skills that would make them stand out in their respective career pathways. As part of the module 5BC004 Practical Molecular Bioscience Assay and Research Methods, they will also consider job applications, and how best to present themselves, by making a formal written application for an Honours project. Students will also be directed to the relevant University careers support services.

Assessment Methods:

At the University of Wolverhampton, a variety of modes of assessment will be used to support and test your learning and progress and to help you develop capabilities that are valued beyond your University studies and into your working life. Your course may include a variety of assessment activities:

Written examinations (including online examinations, open and closed book examinations and quizzes)
Coursework (for example, essays, reports, portfolios, project proposals and briefs, CVs, poster presentation)
Practical (for example, oral and video presentations, laboratory work, performances, practical skills assessment)

In the final year of your undergraduate degree, and at the end of your postgraduate degree, you are likely to be expected to write an extended piece of work or research, such as a dissertation or a practice-based piece of research.

Student Support:

The design of this award allows students to receive learning support targeted to individual needs. The generic module support delivered by the module teams includes regular reflective support meetings. In addition, more generic advice and feedback derived from the generic electronic assessment feedback to allow students to reflect on their personal issues in the context of the group performance.

The demonstrator team provides extensive learning support for students. The team is qualified to advise students at all stages of undergraduate study and provides regular informal drop-in sessions. This is supported by on-line bookable appointments with either demonstrators or academic staff to act as an additional layer of support. The Learning Centre offers considerable support with regards to study skills, as well as focussing on aspects of information retrieval.

During Level 4 studies, students are introduced to the basic approaches to study skills. This includes online literature searches, academic writing, and referencing skills. This is supported by academic staff within lectures, small group discussions and personal tutorial sessions.

Level 5 develops this by the demonstrator team facilitating the transition to primary literature information retrieval through project preparation.

Finally, at level 6, each student is individually supported throughout the project cycle in all aspects of the investigative process.

Employability in the Curriculum:

Geneticists and molecular biologists are in high demand across a range of scientific enterprises, for example, the multitude of genome projects have generated huge potential for scientists for drug design and delivery in the pharmaceutical and biotechnology industries. There is a growing demand for geneticists in the Health Service, in particular to run genetic diagnostics services and counselling, with potential for expansion with the coming personalised medicine revolution. Molecular methods are also undertaken extensively in hospital diagnostics in laboratories for disease diagnosis and in forensic science to provide evidence from crime scenes. There is also the opportunity to study for a higher degree after you graduation, for example MSc Molecular Biology with Bioinformatics, or MSc Applied Microbiology and Biotechnology or possibly to study a P.G.C.E. to gain qualified teacher status.

The completion of a Sandwich Year will enable you to gain valuable hands on experience in a relevant work environment. This will not only provide additional practical subject skills but it will also develop personal transferable skills such as communication skills, problem solving skills and demonstrate competency in working with other people. This will increase your employability and assist you in gaining employment in the future.



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