

Course Specification

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Produced By:	Laura Clode
Status:	Validated

Core Information

Awarding Body / Institution:	University of Wolverhampton		
School / Institute:	Wolverhampton School of Sciences		
Course Code(s):	BC002P01UV BC002P31UV	Full-time Part-time	12 Months 2 Years
Course Title:	MSc Molecular Biology with Bioinformatics		
Hierarchy of Awards:	Master of Science Molecular Biology with Bioinformatics Postgraduate Diploma Molecular Biology with Bioinformatics Postgraduate Certificate Molecular Biology with Bioinformatics Postgraduate Certificate Molecular Biology with Bioinformatics University Statement of Credit University Statement of Credit		
Language of Study:	English		
Date of DAG approval:	30/May/2017		
Last Review:	2011/2		
Course Specification valid from:	2011/2		
Course Specification valid to:	2019/0		

Academic Staff

Course Leader:	Opeolu Ojo
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)

Normally, you should have a good honours degree (2:2 minimum) or equivalent in a bioscience subject, although substantial professional experience can substitute for graduate status. Graduates from other disciplines (eg. computer science) are welcome to apply. You should also have a good standard of written and spoken English (IELTS 6.0 or equivalent). If you are currently employed, we request a statement of support from your employer.

Distinctive Features of the Course:

The University of Wolverhampton has a long-standing reputation for the provision of training in Molecular Biology at all levels. The course is has been at the forefront in the identification of bioinformatic skills and has lead to graduates achieving high profile employment as bioinformaticians.

This course addresses the rapidly developing field of modern genetics and prepares them for the post-genomics era. The research-active staff who are associated with the Research Institute in Healthcare Science (research evaluated as of national and international excellence at the last Research Assessment Exercise) provide a highly research-focused environment which informs both teaching and the students' own research projects.

Educational Aims of the Course:

This course has the following aims:=-

This MSc is designed for qualified biological science undergraduates who wish to develop and enhance their skills in the rapidly developing field of modern genetics and prepares them for the post- genomics era. This course will introduce students to the latest developments in molecular biology and develop key practical skills. This course will also introduce the rapidly developing field of bioinformatics and provides you with the essential skills of data extraction and introductory computing skills. Research projects will be coupled to active research within the University. Jobs are available in international research centres, large and small pharmaceutical and biotech companies, health industries and hospitals. This MSc can lead to careers in research and further study at PhD level.

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	H	Full Time	£6400.00
2020/1	Overseas	Full Time	£13350.00
2020/1	H	Part Time	£3200.00

PSRB:

None

Course Structure:

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:

None

Reference Points:

- QAA subject specific points for Masters level in this subject are not published. The undergraduate Bioscience QAA has been used for guidance section 5.10-5.11, as well as the published criteria for Masters provision.
- In keeping with the FHEQ Qualification framework for HE qualifications.
- Equality Act (2010)
- School of Applied Sciences: Assessment Handbook. Staff Guide to Procedure and Practice 2005
- Criteria and requirements for the accreditation and re-accreditation of MSc degrees in Biomedical Sciences Modified July 2009 (Edition 2)

Learning Outcomes:

PGCert Course Learning Outcome 1 (PGCCL01)

Demonstrate a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of your academic discipline, field of study or area of professional practice with a conceptual understanding that enables the student: (a) to evaluate critically current research and advanced scholarship in the discipline (b) to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

PGCert Course Learning Outcome 2 (PGCCL02)

Demonstrate a comprehensive understanding of techniques applicable to your own research or advanced scholarship and ability to continue to advance your knowledge and understanding, and to develop new skills to a high level.

PGCert Course Learning Outcome 3 (PGCCLO3)

Demonstrate originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline.

PGCert Course Learning Outcome 4 (PGCCLO4)

Ability to deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate your conclusions clearly to specialist and non-specialist audiences.

PGDip Course Learning Outcome 1 (PGDCLO1)

Demonstrate a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of your academic discipline, field of study or area of professional practice with a conceptual understanding that enables the student: (a) to evaluate critically current research and advanced scholarship in the discipline (b) to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

PGDip Course Learning Outcome 2 (PGDCLO2)

Demonstrate a comprehensive understanding of techniques applicable to your own research or advanced scholarship and ability to continue to advance your knowledge and understanding, and to develop new skills to a high level.

PGDip Course Learning Outcome 3 (PGDCLO3)

Demonstrate originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline.

PGDip Course Learning Outcome 4 (PGDCLO4)

Ability to deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate your conclusions clearly to specialist and non-specialist audiences.

Masters Course Learning Outcome 1 (MACLO1)

Demonstrate a systematic knowledge of molecular biology and bioinformatics at the forefront of research, including a critical awareness of applications to inherited disease and diagnosis.

Masters Course Learning Outcome 2 (MACLO2)

Demonstrate a comprehensive understanding of the practical, professional and/or research skills necessary for working as a Molecular Geneticist and Bioinformatician:

Masters Course Learning Outcome 3 (MACLO3)

Demonstrate the intellectual skills of handling complex issues systematically and creatively enabling originality in problem solving and advanced scholarship.

Masters Course Learning Outcome 4 (MACLO4)

Exhibit postgraduate generic skills of initiative, personal responsibility, independent learning, effective communication and numerical skills, which enable independent decision making and allows continuing professional development.

Overview of Assessment:

Module	Title	Course Learning Outcomes
7AB002	Masters' Laboratory Techniques	MACLO2, MACLO4, PGCCLO2, PGCCLO4, PGDCLO2, PGDCLO4
7AB005	Masters Research Project	MACLO2, MACLO3, MACLO4
7AB007	Research Methods	MACLO2, MACLO3, MACLO4, PGCCLO2, PGCCLO3, PGCCLO4, PGDCLO2, PGDCLO3, PGDCLO4
7BC002	Molecular Genetics and Genomics	MACLO1, MACLO3, MACLO4, PGCCLO1, PGCCLO3, PGCCLO4, PGDCLO1, PGDCLO3, PGDCLO4
7BC003	DNA Datamining	MACLO1, MACLO2, MACLO4, PGCCLO1, PGCCLO2, PGCCLO4, PGDCLO1, PGDCLO2, PGDCLO4
7CI006	Data Management	MACLO1, MACLO2, MACLO4, PGCCLO1, PGCCLO2, PGCCLO4, PGDCLO1, PGDCLO2, PGDCLO4
7CS001	Modern Computer Science	MACLO1, MACLO2, MACLO4, PGCCLO1, PGCCLO2, PGCCLO4, PGDCLO1, PGDCLO2, PGDCLO4

Teaching, Learning and Assessment:

- Lectures to provide research and practice-based comprehension of the major areas of Molecular Genetics to an advanced level. Introduction and development of programming and database processing.
- Tutorials to focus understanding gained in lectures on research or case-based issues
- Practicals to develop key molecular laboratory and computational skills.
- Seminars to allow exchange of ideas and knowledge with peers and with tutors.
- Workshops to develop practical skills such as information and data-handling.
- Research project to enhance practical research skills, problem-solving abilities and competencies to analyse, evaluate and present research.

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:

LIS supplied skills support activities and workshops. Tutor support is available formally through timetabled tutorials. Demonstrators are available for individual appointments to assist with generic study skills. Electronic support is available via CANVAS.

Academic skills are developed through feedback on assessments and through individual appointments available with tutors.

Employability in the Curriculum:

Graduates who have obtained the MSc in Molecular Biology and Bioinformatics will be eligible to seek employment in the following areas:

- Molecular and Bioinformatics research and development positions
- National Health Service(NHS) pathology laboratories
- Public Health Laboratory Service (PHLS)/ microbiology laboratories
- Veterinary and agricultural laboratories
- Forensic laboratories
- Private Pathology Service Laboratories
- Research Laboratories
- Industrial Science roles
- Pharmaceutical Industry roles

The MSc also provides suitable preparation for further research/professional study at Doctoral level leading to a PhD or Professional doctorate (DBMS).



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