



Course Information Form

This Course Information Form provides the definitive record of the designated course

Section A: General Course Information

Course Title	MSc Biotechnology with Project Management
Final Award	MSc
Route Code	MSBPMAAF
Intermediate Qualification(s)	
FHEQ Level	7
Location of Delivery	University Square Campus, Luton
Mode(s) and length of study	Full time over 24 months
Standard intake points (months)	October, February
External Reference Points as applicable including Subject Benchmark	FHEQ (2014) QAA 2020 Masters Degree Characteristics Statement SEEC Credit Level Descriptors (2021) Aspects of QAA subject benchmarking for BSc (Hons) Biological Science (2019), Medicine (2002), Pharmacy (MPharm) (2002) and Engineering (MEng) (2020).
Professional, Statutory or Regulatory Body (PSRB) accreditation or endorsement	n/a

HECoS code(s)	100134
UCAS Course Code	n/a

Course Aims	<p>The aim of the course is to provide you with an understanding of how microbes can be used to benefit humankind. New technologies in molecular biology, microbiology and computational biology will be taught and it will be shown how these methodologies are applied in biotechnology industries including Project management and the underlying biochemistry explained at an advanced level.</p> <p>A laboratory based project will be offered in one of the five taught themes – (i) molecular biology, (ii) computational biology, (iii) applied microbiology, (iv) biomaterials, and (v) analytical biology to provide our graduates with the laboratory skills required for subsequent employment in biotech/pharmaceutical industries or academia.</p>																					
	<p>Upon successful completion of your course you should meet the appropriate learning outcomes for your award shown in the table below</p> <table border="1"> <thead> <tr> <th></th> <th>Outcome</th> <th>Award</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Demonstrate systematic understanding and a critical awareness of new technologies in molecular biology</td> <td>Msc Biotechnology with Project Management</td> </tr> <tr> <td>2</td> <td>Show significant knowledge and understanding of the principles of recombinant protein expression and development process</td> <td>Msc Biotechnology with Project Management</td> </tr> <tr> <td>3</td> <td>Demonstrate systematic knowledge and understanding of nucleotide and protein sequence databases and the tools to model 3-dimensional protein structures with molecular modelling software</td> <td>Msc Biotechnology with Project Management</td> </tr> <tr> <td>4</td> <td>Show systematic understanding of those industrial processes to exploit the use of microbes for a specific product or application</td> <td>Msc Biotechnology with Project Management</td> </tr> <tr> <td>5</td> <td>Use assured, accurate and fluent language to present work both orally and in written form including use of graphs and images to clearly illustrate complex points</td> <td>Msc Biotechnology with Project Management</td> </tr> <tr> <td>6</td> <td>Synthesise and effectively use information from relevant sources and to independently and critically evaluate current research and advanced scholarship in the relevant subject areas</td> <td>Msc Biotechnology with Project Management</td> </tr> </tbody> </table>			Outcome	Award	1	Demonstrate systematic understanding and a critical awareness of new technologies in molecular biology	Msc Biotechnology with Project Management	2	Show significant knowledge and understanding of the principles of recombinant protein expression and development process	Msc Biotechnology with Project Management	3	Demonstrate systematic knowledge and understanding of nucleotide and protein sequence databases and the tools to model 3-dimensional protein structures with molecular modelling software	Msc Biotechnology with Project Management	4	Show systematic understanding of those industrial processes to exploit the use of microbes for a specific product or application	Msc Biotechnology with Project Management	5	Use assured, accurate and fluent language to present work both orally and in written form including use of graphs and images to clearly illustrate complex points	Msc Biotechnology with Project Management	6	Synthesise and effectively use information from relevant sources and to independently and critically evaluate current research and advanced scholarship in the relevant subject areas
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Course Learning Outcomes																						

	7	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 laboratory based research	Msc Biotechnology with Project Management
	8	Apply a range of transferable skills (initiative, personal responsibility, effective communication and decision-making) that include clear demonstration of independent learning commensurate with that expected from postgraduate students	Msc Biotechnology with Project Management
	9	Demonstrate a systematic understanding of and critically assess the external context in which modern organisations operate including economic, political, social and environmental change and the regulatory and governance trends impacting on different organisations	Msc Biotechnology with Project Management
	10	Demonstrate sensitivity to the complexity of implementing plans and of achieving change in organisations both because of individual and organisational obstacles and critically appraise the methods available to managers to handle this complexity	Msc Biotechnology with Project Management
	11	Demonstrate a systematic understanding of career planning including factors of organisational and personal collaboration that impact on career trajectories, and be able to conduct a self-evaluation of oneself against relevant skills and organisational competences to establish a personal development plan that delivers personal and organisational performance impact .	Msc Biotechnology with Project Management
	12	Demonstrate knowledge and understanding of what goes into a research proposal, the rudiments of good research design at masters level and be able to produce work of a standard consistent with research publications in your field of study, communicating conclusions clearly to a specialist and non-specialist audience	Msc Biotechnology with Project Management

Teaching, learning and assessment strategies

This course is delivered using a blended learning strategy which makes use of the University's virtual learning environment (VLE). This contains supporting information for the course, including assessment briefing documents and details; announcements/notices; lecture notes; PowerPoint presentations.

Students will be provided with training in presentation skills throughout the course during seminars and workshops. This transferable skills training will equip them for both the assessments and for future employment.

As appropriate the VLE site for a unit will also contain other support material to aid understanding of the course material. This allows it to act as a "gateway" to other web-based resources. Links are provided to websites containing information such as; supporting lecture material; pictures or movie (avi, etc.); clips showing a biological principle live or in a model; self-learning/assessment sites on the internet; journal articles or technical sites. These sorts of web-based material along with interactive websites that provide virtual-practicals, where students can undertake practical or modelling on their own and view the results, are all methods of supporting independent and blended learning to improve the students' performance.

The course supports meaningful learning through a curriculum that is intellectually challenging and of practical relevance to those seeking a future career in areas of biotechnology. The course is designed to encourage a reflective, student-centred approach to learning. The course incorporates some of the latest developments in the subject of molecular biology, computational biology, applied microbiology and analytical methods with students being referred to the latest books and key references in research journals as sources of information. As such the course will be challenging in introducing new ideas and concepts.

Students will be active in their learning through interaction in lectures, seminars, tutorials, workshops, participating in laboratory practical and in preparing the assessments. Students will be encouraged to be reflective in their learning by seeking to integrate the academic content of the different units on the course and reflecting on the implications of biotechnology on society. Students are encouraged to interact with the research active teaching team. Laboratory sessions are also good environments for student communication within the cohort making the learning process a collaborative effort.

Assessment

Assessment is undertaken in all units of the course to check that you have met the threshold standards expected of all students. Most units have two summative assessment points and you will be provided with feedback that is designed to show you where you are meeting/exceeding the standards and where/how you can/should make further improvement.

The final assessment in most of the taught units is a formal written examination. Elsewhere, a range of assessment methods are used. These include not only scientific laboratory reports, but others that develop a range of transferable skills, including research proposals and poster/oral presentations. These are designed to build upon and extend what is expected of students with an undergraduate degree.

<p>Learning support</p>	<p>Students are actively supported through their assessments both directly in subject specific areas by tutors, and by working with the Study Hub to provide targeted workshops to support academic skills development. The focal areas include an introduction to academic integrity, developing good academic practice, scientific writing, use of statistics, and communication of science to diverse audiences including presentation skills also aligned to assessment requirements.</p> <p>Throughout course delivery workshops and tutorials are used to support the development of academic skills, alongside the learning and the assessment process. All in-course assessments are supported by timetabled, interactive tutorial sessions with formative assessment tasks, as appropriate. In addition, assessments that are based around practical work will involve a briefing before, and a session after the laboratory work to explain further the expectations of the assessment and support specific tasks such as data analysis. Examinations are supported by timetabled revision sessions and by workshop sessions covering examples of past examinations and the expectations of examination questions at each level.</p> <p>To assist our learners, assignment briefs a uniform set of information and a consistent set of assessment criteria across the course. At the start of each level, students are given introductory session(s) that set out the expectations for each year. For entry points, several sessions are used to provide guidance and support to students joining the University. These provide details of support for the development of academic skills and learning from the School, the Study Hub and initiatives such as peer-assisted learning (PASS scheme). For students progressing between levels, introductory sessions are also provided to ensure the students are aware of the change in expectations of learning and assessment. This will flag areas such as expectations for increased self-directed learning, critical thinking and analysis that are expected as students go through the learning process.</p> <p>A key aim for the school is the integration of transferable skills within learning and assessment to enhance employability. Our courses build awareness of business applications of knowledge with assessments that develop practical ideas and employability. This is supported by the University's Careers and Employability service throughout the course.</p> <p>Students who commit academic offences due to a lack of clear understanding of academic integrity are further supported by being invited to attend academic practice guidance (APG) meetings with course staff to discuss the issues, and to refer them to the university academic integrity resource (AIR) to encourage them to develop good academic skills.</p> <p>As highlighted, alongside the direct support by the School, the University provides a comprehensive student support service includes: Student Information Desk, a one-stop shop for any initial enquiries; Student Support team advising and supporting those with physical or learning needs or more general student well-being; Study Hub team providing academic skills guidance; Personal Academic Tutoring system; a student managed peer-assisted learning scheme; and the University's Careers and Employability providing support on the transition to the workplace.</p>
	<p>https://www.beds.ac.uk/entryrequirements</p>

Admissions Criteria	Approved Variations and Additions to Standard Admission n/a
Assessment Regulations	https://www.beds.ac.uk/about-us/our-university/academic-information Note: Be aware that our regulations change every year Approved Variations and Additions to Standard Assessment Regulations' n/a

Section B: Course Structure

The Units which make up the course are listed below. Each unit contributes to the achievement of the course learning outcomes either through teaching (T), general development of skills and knowledge (D) or in your assessments (A).

Unit	Unit Name	Level	Credits	Core or Option	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BHS000-6	Biotechnology Research Project	7	60	Core					DA1	DA2	DA1	DA1							
BHS012-6	Molecular Biology	7	30	Core	TA1	TA2			TA2			TA1							
BHS013-6	Analytical Methods	7	30	Core		TA1		TA2	TA2	TA1									
BHS014-6	Applied Microbiology	7	30	Core		TA2		TA1	TA2	TA1									
BHS042-6	Biomaterials	7	15	Core		TA1		TA2											
BHS043-6	Computational and Systems Biology	7	15	Core			TA1			TA1	TA2	TA2							
BSS060-6	Project Management	7	30	Core									TA1	TA1	TA2				
BSS064-6	Leading and Managing Organisational Resources	7	30	Core									TA1	TA2	TA2				
BSS074-6	Personal Professional development	7		Core															
CIS132-6	Developing Independent Research	7		Core															

Unit	Unit Name	Level	Credits	Core or Option	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BHS000-6	Biotechnology Research Project	7	3600	Core					DA1	DA2	DA1	DA2							

Section C: Assessment Plan

The course is assessed as follows :

MSBPMAAF- MSc Biotechnology with Project Management

Unit Code	Level	Period	Core/Option	Ass 1 Type code	Ass 1 Submit wk	Ass 2 Type code	Ass 2 Submit wk	Ass 3 Type code	Ass 3 Submit wk	Ass 4 Type code	Ass 4 Submit wk
CIS132-6	7	BLK1 (AY2)	Core	CW-RW	8						
BSS074-6	7	BLK2 (AY2)	Core	CW-EPO	8						
BSS064-6	7	BLK3 (AY2)	Core	CW-EPO	6						
BSS060-6	7	BLK4 (AY2)	Core	PR-OR	3	WR-I	6				
BHS012-6	7	SEM1 (AY1)	Core	PR-OR	5	WR-I	13				
BHS042-6	7	SEM1 (AY1)	Core	PR-LAB	8	EX	15				
BHS043-6	7	SEM1 (AY1)	Core	CW-PO	14						
BHS013-6	7	SEM2 (AY1)	Core	WR-PO	9	EX	15				
BHS014-6	7	SEM2 (AY1)	Core	CW-PO	13						
BHS000-6	7	SEM3 (AY2)	Core	CW-JO	15	PJ-PRO	14	PR-OR	15		

MSBPMAAF- MSc Biotechnology with Project Management (Feb start)

Unit Code	Level	Period	Core/Option	Ass 1 Type code	Ass 1 Submit wk	Ass 2 Type code	Ass 2 Submit wk	Ass 3 Type code	Ass 3 Submit wk	Ass 4 Type code	Ass 4 Submit wk
BSS064-6	7	BK3 (AY2)	Core	CW-EPO	6						
BSS060-6	7	BLK4 (AY2)	Core	PR-OR	3	WR-I	6				
BSS074-6	7	BLK5 (AY2)	Core	CW-EPO	8						
CIS132-6	7	BLK6 (AY2)	Core	CW-RW	8						
BHS012-6	7	SEM1 (AY2)	Core	PR-OR	5	WR-I	13				
BHS042-6	7	SEM1 (AY2)	Core	PR-LAB	8	EX	15				
BHS043-6	7	SEM1 (AY2)	Core	CW-PO	14						
BHS000-6	7	SEM1 (AY3)	Core	CW-JO	15	PJ-PRO	14	PR-OR	15		
BHS013-6	7	SEM2 (AY1)	Core	WR-PO	9	EX	15				
BHS014-6	7	SEM2 (AY1)	Core	CW-PO	13						

Glossary of Terms for Assessment Type Codes

CW-EPO	Coursework - e-Portfolio
CW-JO	Coursework - Journal
CW-PO	Coursework - Portfolio
CW-RW	Coursework - Reflective Writing
EX	Exam (Invigilated)

PJ-PRO	Coursework - Project Report
PR-LAB	Practical - Laboratory Based
PR-OR	Practical - Oral Presentation
WR-I	Coursework - Individual Report
WR-PO	Coursework - Poster

Administrative Information

Faculty	Creative Arts Technologies and Science
School	School of Life Sciences
Head of School/Department	Professor Prasad Sreenivasaprasad
Course Coordinator	Guy Grant