

## PROGRAMME SPECIFICATION FOR AN AWARD OF THE UNIVERSITY OF EAST ANGLIA

Course name	Course code <i>note PS</i>	Year
MICROBIOLOGY (MSci)	U1C501402	2017/18

**NOTE:** Whilst the University will make every effort to offer the modules listed, changes may sometimes have to be made for reasons outside the University's control (e.g. illness of a member of staff) or because of low enrolment or sabbatical leave.

## COURSE SUMMARY

<b>S1</b>	<b>a</b>	<b>SCHOOL(S) OF STUDY</b>	Biological Sciences	
<i>note S1c</i>	<b>b</b>	<b>FACULTY or FACULTIES</b>	Science	
	<b>c</b>	<b>JOINT COURSE?</b> (ie owned/taught by more than one School)	<b>YES</b>	
			<b>NO</b>	X
	<b>d</b>	<b>NAME OF COURSE DIRECTOR</b> (Home School)	Dr Jonathan Todd	
	<b>e</b>	<b>NAME OF DEPUTY COURSE DIRECTOR</b> (partner School, for Joint Courses only)	Dr Gary Rowley	
<b>S2</b>	<b>a</b>	<b>COURSE TITLE</b>	Microbiology	
	<b>b</b>	<b>COURSE CODE</b>	U1C501402	
<i>note S2c &amp; S2d</i>	<b>c</b>	<b>AWARD</b>	The degree of Master of Sciences in Microbiology	
	<b>d</b>	<b>EXIT AWARD(S) AND TITLE(S)</b>	Certificate of Higher Education, Diploma of Higher Education, BSc (Hons)	
	<b>e</b>	<b>FULL/PART-TIME (please specify)</b>	Full time	
	<b>f</b>	<b>LOCATION (UEA Norwich, Distance Learning)</b>	UEA Campus	
	<b>g</b>	<b>AVAILABLE FROM:</b>	2013/4	
<b>S3</b> <i>note S3a</i>  <i>note S3b</i>	<b>a</b>	<b>PROFESSIONAL AWARD (if any)</b>		
	<b>b</b>	<b>ACCREDITING/VALIDATING BODY (if relevant)</b>		
		<b>Website (URL)</b>		
		<b>Date when accreditation/validation may take place</b>		
<b>S4a</b> <i>note S4a</i>	<b>LEVEL</b>	Sub-degree (e.g. Cert. Dip.)	Level 4: Certificate of Higher Education; Level 5: Diploma of Higher Education;	
		Undergraduate	Level 6: Honors degree;	
		Integrated Masters	Level 7: Masters degree	
		Masters	n/a	
		Other postgraduate (please specify)	n/a	
<b>S4b</b> <i>note S4b</i>	<b>FHEQ STATEMENT</b>	Please detail how the programme meets the relevant qualification descriptor from the Framework for Higher Education	The Framework for Higher Education Qualifications (FHEQ) and the Bioscience benchmark statement have guided the overall objectives of the MICROBIOLOGY (MSci) programme. The detailed educational aims are now embedded	

		<p>Qualifications (FHEQ)</p>	<p>within programme specifications, and these are summarised below;</p> <ul style="list-style-type: none"> <li>• To produce high quality graduates capable of proceeding to careers in research, or careers at graduate level in biology-related and non-biology-related areas.</li> <li>• To offer a broadly-based course, providing a diversity of teaching methods in a strongly research-informed environment that enables the delivery of research-led teaching; to motivate our students, to inculcate enthusiasm for the subject and to instil an understanding of scientific research, scholarship and ethics. The programme aims to introduce students to the practice and evaluation of scientific research and builds on this throughout the programme, culminating in the final-year research project.</li> <li>• To attract undergraduates with differing backgrounds, both mature students and school leavers, and to provide them with a progressive acquisition of subject knowledge.</li> <li>• To provide a full-time programme where students can consolidate, deepen and extend their knowledge over the course. Through a learning and teaching strategy designed to provide greater support during the first year, but also to encourage the development of independence and self-directed study, the programme aims to allow students to progress both in biological knowledge and in their own learning skills.</li> <li>• To provide a choice of modules that allows students to construct an education appropriate to their varied interests and career intentions.</li> <li>• To enable the achievement of competence in the methods, techniques and approaches appropriate to experimental work in a modern biological laboratory, or in the field. To undertake such work in a responsible, safe and ethical manner.</li> <li>• To cultivate in students the general intellectual skills of reasoning, independent study, self-management and self-motivation, oral and written self-expression,</li> </ul>
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			quantitative methods, IT literacy, and independent research and scholarship. To provide a range of transferable skills such as time management and organisational skills, enabling an effective approach to study and work.			
<b>S5</b> note S5a	<b>a</b>	<b>DURATION</b> (years or months)	4 Years			
note S5b	<b>b</b>	<b>MODE OF ATTENDANCE</b> (full-time, part-time, distance, other)	Full time			
<b>S6</b> note S6	<b>PLACEMENT(S)/WORK-BASED LEARNING REQUIRED</b>		YES		NO	X
			If YES, does this conform with the UEA's code of practice on placements?			
<b>S7</b> note S7	<b>RELEVANT SUBJECT BENCHMARK STATEMENT(S) and details of how the Programme Specification aligns with these</b>		<p><i>Generic standards, not specific to any particular area</i></p> <p>5.6 All honours graduates in the biosciences would be expected to have achieved these standards at one of the two levels. Students achieving typical standards would, of course, also achieve the threshold.</p> <p><i>Threshold standard</i></p> <p>5.7 On graduating with an honours degree in biosciences, students should:</p> <ul style="list-style-type: none"> <li>• Be able to access bioscience information from a variety of sources and to communicate the principles in a manner appropriate to the programme of study</li> <li>• Have ability in a range of practical bioscience techniques, including data collection, analysis and interpretation of those data, and testing of hypotheses</li> <li>• Have an understanding of the explanation of biological phenomena at a variety of levels (from molecular to ecological systems) and be able to explain how</li> <li>• Evolutionary theory is relevant to their area of study</li> <li>• Be able to plan, execute and present an independent piece of hypothesis-driven work (e.g. a project) within a supported framework in which qualities such as time management, problem solving, and independence are evident</li> <li>• Have some understanding of ethical issues and the impact on society of advances in the biosciences</li> </ul>			

		<ul style="list-style-type: none"> <li>• Be able to record data accurately, and to carry out basic manipulation of data (including qualitative data and some statistical analysis, when appropriate)</li> <li>• Have developed basic strategies to enable them to update their knowledge of the biosciences.</li> </ul> <p><i>Typical standard</i></p> <p>5.8 On graduating with an honours degree in biosciences, students should:</p> <ul style="list-style-type: none"> <li>• Be able to access and evaluate bioscience information from a variety of sources and to communicate the principles both orally and in writing (eg essays, laboratory reports) in a way that is well organised, topical and recognises the limits of current hypotheses</li> <li>• Have ability in a broad range of appropriate practical techniques and skills relevant to the biosciences. This will include the ability to place the work in context and to suggest lines of further investigation have a secure and accurate understanding of the explanation of biological phenomena at a variety of levels (from molecular to ecological systems) and be able to understand the relationship of evolutionary theory to their area of study</li> <li>• Be able to plan, execute and present an independent piece of work (eg a project), in which qualities such as time management, problem solving and independence are evident, as well interpretation and critical awareness of the quality of evidence</li> <li>• Be able to construct reasoned arguments to support their position on the ethical and social impact of advances in the biosciences be able to apply relevant advanced numerical skills (including statistical analysis, where appropriate) to biological data</li> <li>• Have well-developed strategies for updating, maintaining and enhancing their knowledge of the biosciences.</li> </ul>
<p><b>S8</b> <i>note S8</i></p>	<p><b>ENTRY REQUIREMENTS</b></p>	<p>No longer recruited to. Replaced by Biological Sciences MSci programme launched in September 2015</p>

<b>S9</b>	<b>JACS Subject Level Code(s)</b> Consult Planning Office	
<b>S10</b>	<b>UCAS ADMISSION CODE / COURSE CODE</b> Consult Planning Office	
<b>S11</b> <i>note S11</i>	<b>FURTHER INFORMATION</b> (web link to further information)	No longer recruited to. Replaced by Biological Sciences MSci programme launched in September 2015
<b>S12</b>	<b>COURSE HIGHLIGHTS</b> (for publication in University Prospectus / Website /HEAR) Include succinct comments about employability, key skills and learning outcomes	
<i>note S12</i>	No longer recruited to. Replaced by Biological Sciences MSci programme launched in September 2015	

\*\*\*\*Please copy and paste the above table for additional (related) courses\*\*\*\*

<b>AC1</b>	<b>COURSE MANAGEMENT INFORMATION</b>				
AC1.1	REGULATORY FRAMEWORK				
	Undergraduate Regulations (including Integrated Masters)				x
	Postgraduate Taught Regulations				
	Graduate Diplomas				
	PGCE				
AC1.2a	Is the course as a whole assessed on a pass/fail basis?	YES		NO	x
AC1.2b	Are any modules assessed on a pass/fail basis?	YES		NO	x
AC1.2c	If so, how many modules and what is the credit volume for each module?				

<b>AC2</b> <i>note AC2.1</i>	<b>YEAR WEIGHTINGS AND PROGRESSION REQUIREMENTS (For undergraduate or integrated masters courses only)</b>				
	Please select only from the permitted options - see UG/PGT regulations				
Stage <i>Note AC2.2</i>	Level	Year of course	Weightings	Progression requirement	Exit Award <i>Note AC2.3</i>
Stage 0	Level 3				
Stage 1	Level 4	2016/7	0	60%	Cert HE
Stage 2	Level 5	2016/7	20	60%	Cert HE
Year Abroad / in Industry					
Stage 3	Level 6	2016/7	30	60%	Dip HE
Stage M	Level 7	2016/7	50	50%	BSc

<b>AC3</b>	<b>BOARD OF EXAMINERS</b>
AC3.4	EXTERNAL EXAMINERS (see web link below for names, positions and institutions of External Examiners)
	(For Admin use only – to be added by LTS Web Administrator)

**PS1 COURSE PROFILE *For updates to Programme Specifications, copy and paste course profile from eVision****note PS1*

## Course Profile for 2017/8

Course: Microbiology (Msci) (U1C501402)

School: Biological Sciences

Director: Dr Jonathan Todd

### Year 1U

This course is not recruiting to Year 1.

### Year 2U

This course is not recruiting to Year 2.

### Year 3U

Students must take BIO-6019Y or BIO-6023Y. Students may be moved from BIO-6019Y to BIO-6023Y, based on stage 2 results. In each case the project topic must be agreed with the Course Director.

#### Compulsory Modules (100 credits)

Module	Description	Assessment	Credits	Period	Sub-slot
<a href="#">BIO-6019Y</a>	RESEARCH PROJECT	PR	40	YEAR	U
<a href="#">BIO-6023Y</a>	BIOLOGY RESEARCH SKILLS	PR	40	YEAR	U
<a href="#">BIO-6004A</a>	MICROBIAL BIOTECHNOLOGY	WW	20	SEM1	BGJ
<a href="#">BIO-6007B</a>	MOLECULAR PLANT-MICROBE INTERACTIONS	WW	20	SEM2	AJL
<a href="#">BIO-6005B</a>	MICROBIAL CELL BIOLOGY	WW	20	SEM2	BGJ

#### Options Range A

Students will select 20 credits from the following modules:



Module	Description	Assessment	Credits	Period	Sub-slot
<a href="#">BIO-6001A</a>	MOLECULAR ENZYMOLOGY IN BIOLOGY AND MEDICINE	WW	20	SEM1	CC
<a href="#">BIO-6010B</a>	INFECTION AND IMMUNITY	WW	20	SEM2	DL
<a href="#">BIO-6013A</a>	GENOMES, GENES AND GENOMICS	WW	20	SEM1	DD
<a href="#">BIO-6016A</a>	HOST-PARASITE INTERACTIONS	WW	20	SEM1	AGJ
<a href="#">BIO-6018Y</a>	SCIENCE COMMUNICATION	CW	20	YEAR	CC

## Year 4U

### Compulsory Modules ( 80 credits)

Module	Description	Assessment	Credits	Period	Sub-slot
<a href="#">BIO-7009Y</a>	MSCI RESEARCH PROJECT	CP	60	YEAR	U
<a href="#">BIO-7005B</a>	SEMINARS IN MICROBIOLOGY	CW	20	SEM2	U

### Options Range A

Students will select 40 credits from the following modules:

Module	Description	Assessment	Credits	Period	Sub-slot
<a href="#">BIO-7004A</a>	GENOMES, GENES AND GENOMICS	CW	20	SEM1	DD
<a href="#">BIO-7007B</a>	INFECTION AND IMMUNITY	CW	20	SEM2	DL
<a href="#">BIO-7008A</a>	EVOLUTION IN HEALTH AND DISEASE	CW	20	SEM1	AJL

**PS2 MAPPING LEARNING OUTCOMES**

*note PS2*

<b>Mapping learning outcomes – please list learning outcomes and enter module code against assessment type</b> <b>YEAR 1 learning outcomes</b>	Assessment type								
	Essay	Lab report	Course test	Exam	Project/ Dissertation/ Report	Oral Presentation	Assessment of practice	Other	Other
A broad introductory knowledge of biological sciences: - fundamentals of biodiversity - fundamentals of evolution, behaviour and ecology - fundamentals of molecular biology and genetics - fundamentals of cell biology and biochemistry		BIO-4001A BIO-4002B BIO-4003A BIO-4004B							
To begin to acquire requisite scientific skills (non-practical) - statistical analysis and maths - chemistry and physics									
To begin to acquire requisite scientific skills (laboratory/field based) - competence in methods/techniques and protocols plan and execute scientific investigations		BIO-4001A BIO-4002B BIO-4003A BIO-4004B					BIO-4001A BIO-4004B	BIO-4001A	
To synthesise information using analysis of literature and collecting and/or analysing data		BIO-4001A BIO-4002B BIO-4003A BIO-4004B		BIO-4001A BIO-4002B BIO-4003A BIO-4004B					
To communicate the above (oral)									
To begin to appreciate the ethical issues and the impact and place of science in society									
<b>Other:</b> please give details									

**PS2 MAPPING LEARNING OUTCOMES - continued**

note PS2

<b>Mapping learning outcomes – please list learning outcomes and enter module code against assessment type</b> <b>YEAR 2 learning outcomes</b>	Assessment type								
	Essay	Lab report	Course test	Exam	Project/ Dissertation/ Report	Oral Presentation	Assessment of practice	Other	Other
To acquire a deeper knowledge and understanding of microbial biochemistry, genetics, physiology and other aspects depending on the choice of modules made by the student	BIO-5004A BIO-5005B BIO-5006A BIO-5009A BIO-5014B BIO-5012Y	BIO-5002A BIO-5003B BIO-5004A BIO-5005B BIO-5006A BIO-5009A BIO-5014B BIO-5015B		BIO-5002A BIO-5003B BIO-5004A BIO-5005B BIO-5006A BIO-5008B BIO-5009A BIO-5014B BIO-5015B				BIO-5002A	BIO-5008B
Identifying and understanding how various aspects of biology are applied to biological issues and concerns	BIO-5004A BIO-5005B BIO-5006A BIO-5009A BIO-5014B BIO-5012Y			BIO-5002A BIO-5003B BIO-5004A BIO-5005B BIO-5006A BIO-5008B BIO-5009A BIO-5014B BIO-5015B		BIO-5004A BIO-5005B BIO-5012Y	BIO-5015B	BIO-5002A	BIO-5014B
To begin to develop critical analytical skills; to be able to test theories and concepts	BIO-5002A BIO-5003B BIO-5004A BIO-5005B BIO-5006A BIO-5009A BIO-5014B BIO-5015B		BIO-5002A BIO-5003B BIO-5004A BIO-5005B BIO-5006A BIO-5008B BIO-5009A BIO-5014B BIO-5015B			BIO-5015B		BIO-5003B BIO-5008B	
To develop the skills to critically review and evaluate scientific literature	BIO-5004A BIO-5005B BIO-5006A BIO-5009A BIO-5014B	BIO-5002A BIO-5003B BIO-5004A BIO-5005B BIO-5006A				BIO-5004A BIO-5005B		BIO-5002A	BIO-5008B

	BIO-5012Y	BIO-5009A BIO-5014B BIO-5015B							
To apply and develop requisite scientific skills	BIO-5002A BIO-5003B BIO-5004A BIO-5005B BIO-5006A BIO-5009A BIO-5014B BIO-5015B		BIO-5002A BIO-5003B BIO-5004A BIO-5005B BIO-5006A BIO-5008B BIO-5009A BIO-5014B BIO-5015B			BIO-5015B		BIO-5008B workshop report	
To synthesise information using analysis of literature and collecting and/or analysing data	BIO-5004A BIO-5005B BIO-5006A BIO-5009A BIO-5014B BIO-5012Y	BIO-5002A BIO-5003B BIO-5004A BIO-5005B BIO-5006A BIO-5009A BIO-5014B BIO-5015B		BIO-5002A BIO-5003B BIO-5004A BIO-5006A BIO-5008B BIO-5009A BIO-5014B BIO-5015B		BIO-5004A BIO-5005B BIO-5012Y	BIO-5015B	BIO-5002A	BIO-5008B
To communicate the above (written and oral)	BIO-5004A BIO-5005B BIO-5006A BIO-5009A BIO-5014B BIO-5012Y	BIO-5002A BIO-5003B BIO-5004A BIO-5005B BIO-5006A BIO-5009A BIO-5014B BIO-5015B				BIO-5004A BIO-5005B BIO-5012Y		BIO-5002A	BIO-5008B
To appreciate specific ethical issues and the impact and place of science in society	BIO-5004A BIO-5005B BIO-5006A BIO-5009A BIO-5014B BIO-5012Y								
To broaden knowledge/experience, not necessarily associated with biology (defined choice)									
<b>Other:</b> please give details									

**PS2 MAPPING LEARNING OUTCOMES - continued**

note PS2

<b>Mapping learning outcomes – please list learning outcomes and enter module code against assessment type</b> <b>YEAR 3 learning outcomes</b>	Assessment type								
	Essay	Lab report	Course test	Exam	Project/ Dissertation/ Report	Oral Presentation	Assessment of practice	Other	Other
A deeper knowledge and understanding of microbial biochemistry, genetics, physiology and ecology and other selected aspects of biology including microbial biotechnology, molecular plant-microbe interactions, immunology, advanced molecular biology, molecular enzymology, and other aspects depending on the choice of modules made by the student (with progression from Stage 2 [many modules have pre-requisites])	BIO-6001A BIO-6002B BIO-6010B BIO-6013A BIO-6018Y BIO-6005B	BIO-6001A BIO-6002B BIO-6013A		BIO-6001A BIO-6002B BIO-6004A BIO-6007B BIO-6010B BIO-6013A BIO-6016A BIO-6005B	BIO-6019Y BIO-6020Y	BIO-6007B BIO-6019Y BIO-6020Y BIO-6005B	BIO-6018Y BIO-6019Y BIO-6020Y	BIO-6004A BIO-6018Y BIO-6007B BIO-6010B	
To further develop the skills to critically review and evaluate scientific literature	BIO-6001A BIO-6002B BIO-6010B BIO-6013A BIO-6018Y BIO-6005B	BIO-6001A BIO-6002B BIO-6013A			BIO-6019Y BIO-6020Y	BIO-6005B		BIO-6018Y BIO-6007B BIO-6010B	
To apply and develop requisite scientific skills; to frame and test hypotheses (applying quantitative and reasoning skills); to demonstrate competence in methods, techniques and protocols in a modern microbial laboratory		BIO-6001A BIO-6002B BIO-6013A			BIO-6019Y BIO-6020Y	BIO-6005B			
To synthesise and critically evaluate information using analysis of literature and collecting and/or analysing data	BIO-6001A BIO-6002B BIO-6010B BIO-6013A BIO-6018Y BIO-6005B	BIO-6001A BIO-6002B BIO-6013A			BIO-6019Y BIO-6020Y	BIO-6005B		BIO-6018Y BIO-6007B BIO-6010B	
To communicate the above (written and oral)	BIO-6001A BIO-6002B BIO-6010B BIO-6013A	BIO-6001A BIO-6002B BIO-6013A		BIO-6001A BIO-6002B BIO-6004A BIO-6007B	BIO-6019Y BIO-6020Y	BIO-6007B BIO-6019Y BIO-6020Y BIO-6005B	BIO-6018Y BIO-6019Y BIO-6020Y BIO-6005B	BIO-6004A BIO-6018Y BIO-6007B BIO-6010B	

	BIO-6018Y BIO-6005B			BIO-6010B BIO-6013A BIO-6016A BIO-6005B					
To appreciate specific ethical issues and the impact and place of science in society	BIO-6001A BIO-6002B BIO-6010B BIO-6013A BIO-6018Y BIO-6005B						BIO-6018Y	BIO-6018Y	
To broaden knowledge/experience, not necessarily associated with biology (defined choice)									
<b>Other:</b> please give details									

<b>Mapping learning outcomes – please list learning outcomes and enter module code against assessment type</b> <b>YEAR 4 learning outcomes</b>	<b>Assessment type</b>								
	Essay	Lab report	Course test	Exam	Project/ Dissertation/ Report	Oral Presentation	Assessment of practice	Other	Other
A deeper knowledge and understanding of microbial biochemistry, genetics, physiology and ecology and other selected aspects of biology including microbial biotechnology, molecular plant-microbe interactions, advanced molecular biology, molecular enzymology, and other aspects depending on the choice of modules	BIO-M59Y BIO-M118 BIO-MC28 BIO-MC57 BIO-M115	BIO-M59Y BIO-M115			BIO-M59Y	BIO-M59Y BIO-M118 BIO-MC28 BIO-MC57 BIO-M115	BIO-M59Y BIO-M118 BIO-MC28 BIO-MC57 BIO-M115	BIO-M59Y BIO-M118 BIO-MC28 BIO-MC57 BIO-M115	
To apply and develop requisite scientific skills; to frame and test hypotheses (applying quantitative and reasoning skills); to demonstrate competence in methods, techniques and protocols in a modern microbial laboratory	BIO-M59Y BIO-M118 BIO-MC28 BIO-MC57 BIO-M115	BIO-M59Y BIO-M115			BIO-M59Y	BIO-M59Y BIO-M118 BIO-MC28 BIO-MC57 BIO-M115	BIO-M59Y BIO-M118 BIO-MC28 BIO-MC57 BIO-M115	BIO-M59Y BIO-M118 BIO-MC28 BIO-MC57 BIO-M115	

**PS3 PROGRAMME COHERENCE AND FEEDBACK CYCLES**

*note  
PS3*

**PS3.1 learning progression**

How will progression in terms of skills, knowledge and understanding be reflected in the programme between modules in any one year and across the years as students progress through their course of study?

*note  
PS3.1*

This programme is a derivative of the C100 Biological Sciences programme with which it shares a common 1<sup>st</sup> year. Refer to C105401, QAR2 TD.

The breadth of modern microbiology demands that we teach the fundamentals of microbiology and consequently the subject matter of the Year 2 MSci Microbiology module ranges from Biochemistry, Genetics, Molecular Biology and obviously Microbiology. The students get to choose two 20 credit modules from Human physiology, Cell Biology, Plant Biology, Evolutionary Biology or Biology in Society. We believe that there is something for everyone with interests in microbiology in these modules, but we do recognize the demands that the diversity of material places on students.

From this foundation, students pursuing the U1C501402 programme take compulsory 20 credit modules in Molecular Plant Microbe Interactions (6007B), Microbial Biotechnology (6004A), Microbial Cell Biology (6005B) as well as a compulsory 40 credit Research Project module (6019Y). The module 6007B and 6005B align with the key research interests of, and is taught by guest lecturers from the Sainsbury Laboratory and from the John Innes Centre. The students select a 20 credit module from Molecular Enzymology in Biology and Medicine (6001A), Genomes, Genes and Genomics (6013A), Host Parasite Interactions (6016A), Infection and Immunity (6010B) and Science Communication (6018Y). These modules allow for the students to choose from a broad range of science topics all of which have strong microbiology themes associated. Students who do not achieve an aggregate mark of 55% for Stage 2 are not allowed to take the Research Project module, this condition applies to all exclusive School of Biological Science programmes. Instead, the students undertake a compulsory 40 credit Biology Research Skills module (6023Y); their 'poor' performance at Stage 2 (an aggregate mark of less than 60%, with other requirements also) precludes them from progression and they have to move to the C100301 Biological Sciences Hons programme.

Students progressing to Stage 4 must have either taken the 20 credit Infection and immunity (6010B) at Stage 3 or must do so at Stage 4 (MC28). Students have the option of taking 20 credit modules in Genomes, Genes and Genomics (M115), Evolution In Health and Disease (MC57). To aid the development of MSci Microbiology students in practical lab microbiological experience they have a compulsory MSci Research Project (M59Y) valued at 40 Credits. This project must be supervised principally by a research active microbiologist on the Norwich Research Park. Within this



unit the students are given far more research experience and responsibility than they would have previously received. At this level the students are also required to take the 20 Credit module Seminars in Microbiology (M118) which requires them to attend, report on and have detailed discussion about weekly research seminars delivered by both local and international scientists (ranging from PhD to Professorial level).

Relationship of this programme to neighbouring institutes

The Norwich Research Park affords a wealth of opportunity to students interested in microbiology particularly those who are interested in research careers. The institutes do not have degree awarding status and consequently the degree programmes of the School of Biological Sciences are in many ways a shop window for the institutes in their search for motivated Ph.D. students. The opportunity afforded to our students is enhanced by the involvement of JIC and Sainsbury Laboratory staff in many of the Stage 3 and Stage 4 modules, Molecular Plant Microbe Interactions (6007B) and Microbial Cell Biology (6005B): we do not consider it appropriate that significant contribution is made by institute staff to Stage 1 or Stage 2 teaching. At Stage 3, our students are exploring the world of research and contact with institute staff is often the vehicle by which our students find Stage 3, and in future will find Stage 4 research projects in the institutes. The academic opportunity provided by exposure to a world class exclusively research environment is formative and students who perform well commonly find Ph.D. placements in the institutes, or use the formative experience to help them choose Ph.D. programmes across the UK. Our students are, of course, exposed to world class research in the School of Biological Sciences and often choose research projects in this environment.

**PS3.2 feedback cycle**

Please explain how assessments and feedback / feed forward support the coherence of the programme. Comment on number and types of assessment, both formative and summative; the types and format of feedback students will receive; and their sequencing. How will assessments and feedback impact on subsequent modules?

*note  
PS3.2*

Essentially as in C100

Reflecting the range of learning outcomes, the School uses a number of assessment methods: formal examinations, project reports, course tests, practical and fieldwork reports, poster and oral presentations, essays and worksheets. Current assessment at all levels is summarised as follows;

Level 1/4: 50% Coursework, 50% Examination (exceptions: until 2013/14, seminar-based Modules, BIO-4008Y/10Y Skills for Biologists/with Higher Maths, 20% Coursework and 80% Exam/Course Tests; BIO-4009Y/11Y Foundations for Chemistry and Physiology/with Higher Chemistry, 100% Coursework).

Level 2: 40% Coursework, 60% Examination (exceptions: BIO-5013A Field Ecology and BIO- 5012A Biology in Society which are 100% coursework).

Level 3: 40% Coursework, 60% Examination (exceptions: BIO-6018Y Science Communication, 100% coursework; all project-based Modules which are 100% coursework).

Level 4: 100% Coursework.

Further developments have resulted in the removal of course tests from all year 2 and year 3 modules. The new BIM regulations place a greater emphasis on the formative- summative cycle of assessment and feedback and all 1<sup>st</sup>/2<sup>nd</sup> year modules have introduced formative coursework. Further review of assessment patterns for BIO modules is ongoing, and through the newly introduced Annual Review of Assessment & Moderation Meeting involving the BIO Director of Teaching, Course Directors and LTS staff.

<b>PS4</b>	<b>EXAMINATIONS</b>		<i>note PS4</i>
	<b>Written</b>	<b>Practical (e.g. OSCES and OSPES)</b>	
How many modules will include an exam element?	As in C-100		
How many hours of exams are there in Stage 0? (if applicable)	As in C-100		
How many hours of exams are there in Stage 1?	As in C-100		
How many hours of exams are there in Stage 2?	As in C-100		
How many hours of exams are there in Stage 3?	As in C-100		
How many hours of exams are there in Stage 4? (if applicable)	0		
How many hours of exams are there in Stage 5? (if applicable)			
How many hours does the programme (as a whole) include?			

<b>PS5</b>	<b>EQUALITY &amp; WIDENING PARTICIPATION</b>		<i>note PS5</i>
PS5.1	How do the admissions criteria specifically for this course ensure equality of opportunity for all applicants?		
	Refer to the parent programme C100		
PS5.2	What steps have been taken to ensure an inclusive curriculum?		
	Refer to the parent programme C100		
PS5.3	In what ways do learning and teaching and assessment methods ensure inclusivity, reasonable adjustment and equality of opportunity?		
	Refer to the parent programme C100		

<b>PS6</b>	<b>EMPLOYABILITY</b>		<i>note PS6</i>
	How is employability embedded into the delivery of the course?		
	The employability skills gained of this programme are not necessarily module- or subject specific, they are acquired by reflective assimilation of the learning experience. Students can find guidance from the School of Biological Sciences' Director of Employability (Dr Sam Fountain) and the University Careers Centre. Nevertheless, the opportunities offered to students to undertake research projects in a non-academic (purely research) setting of the neighbouring institutes is formative.		

## KEY INFORMATION SET (KIS) DATA

### SCI BIO Microbiology UNU1C501402

<b>KIS</b>		<b>KEY INFORMATION SET data (undergraduate courses only)</b>						<i>Note KIS</i>
<b>KIS1</b>		<b>Quantitative KIS data</b>						<i>Note KIS1</i>
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	
1.1	Percentage of assessment by written exams		62	41	34	20		
1.2	Percentage of assessment by practical exams		0	0	0	0		
1.3	Percentage of assessment by coursework		38	59	66	80		
1.4	Percentage of time in scheduled learning and teaching activities		30	28	34	34		
1.5	Percentage of time in guided independent study		69	72	66	66		
1.6	Percentage of time on placements		1	0	0	0		
<b>KIS2</b>		<b>Professional Accreditation</b>						<i>Note KIS2</i>
2.1		Name of accrediting body (if applicable)						
		N/A						
2.2		Please give details, including any memberships, exemptions etc that the award confers. Please also give accrediting body website URL.						
		N/A						
2.3		Is the accreditation dependent on specific module choices? If so, please include URL of web pages where these details are outlined.						
		N/A						

UP1 Programme Specification Update Record						
Faculty	Science		School		BIO	
Academic Year	2014/5	2015/6	2016/7	2017/8	2018/9	2019/0
Degree Award (e.g. BSc/MA)		MSci				
Course Title(s)		MICROBIOLOGY (MSci)				
Course Code(s)		U1C501402				
Has the KIS data been changed?	Yes/No	No				
Course Director sign off	Name	JD Todd				
	Date	31/03/17				

IM1 IMPLEMENTATION ACTIONS – ADMIN USE ONLY		
ACTION	DATE	Name
Course Profile updated in Evison ( <b>LTS Team Leader</b> )	10 <sup>th</sup> February 2017	
Programme Specification placed in shared drive folder ( <b>LTS Team Leader</b> )	03 <sup>rd</sup> April 2017	Krissie
Web link to External Examiner information added ( <b>LTS Web Administrator</b> )		
Programme Specification uploaded onto website ( <b>LTS Web Administrator</b> )		
Planning Office informed of upload of Programme Specification onto website (copy of this page to <a href="mailto:cams.records@uea.ac.uk">cams.records@uea.ac.uk</a> ) ( <b>LTS Web Administrator</b> )		
Programme Specification Code ( <b>LTS Team Leader</b> ) (SCH/YEAR/Level/Sequence)	BIO17UG009	
Full route code(s) covered by this Programme Specification ( <b>LTS Team Leader</b> )		