



CORPORATE AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data					
Module Title	Microbiology				
Module Code	USSKB6-15-2	Level	2	Version	1
Owning Faculty	Health and Applied Sciences	Field	Biological, Biomedical and Analytical Science.		
Contributes towards	Biomedical Science, Healthcare Science (Life Sciences; including Clinical)				
UWE Credit Rating	15	ECTS Credit Rating	7.5	Module Type	Standard
Pre-requisites	Pathophysiology of Disease (USSKA7-30-1)	Co- requisites			
Excluded Combinations	Molecular Genetics (USSKB7-15-2); Medicinal Chemistry (USSKB5-15-2)	Module Entry requirements	stand alone		
Valid From	September 2015	Valid to	September 2021		

CAP Approval Date	28/05/2014
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Part 2: Learning and Teaching	
Learning Outcomes	<p>On successful completion of this module students will be able to:</p> <ul style="list-style-type: none"> • Appreciate energy generation and metabolism in microorganisms (component A) • Describe the unique nature of viruses (component A) • Analyse data derived from laboratory study of microorganisms (component A and component B, element 2) • Relate the characteristics of certain microorganisms to their survival and success as pathogens (component A)
Syllabus Outline	<ul style="list-style-type: none"> • Growth, nutrition and death of bacteria • Microbial taxonomy: classical and contemporary techniques for determining microbial taxonomy and phylogeny • The viruses: virus structure, classification and replication • Certain microbial diseases and their control
Contact Hours	<ul style="list-style-type: none"> • This module will run over 1 semester, with lecture weeks (12 x 2 h lectures) and interspersed practicals. <p>The contact hours (36) are divided as follows:</p>

	<ul style="list-style-type: none"> • 24 hours lectures • 6 hours of practical classes • 6 hours tutorial sessions 																														
Teaching and Learning Methods	<p>Scheduled learning is comprised of formal lectures, laboratory classes and associated group discussions. Practical work in the laboratory is assessed both by peer assessment and by academic staff in situ. Where appropriate and when possible, a short field trip may be organised e.g. visit to local sewage works or brewery.</p> <p>Scheduled learning includes lectures, seminars, tutorials, demonstration, practical classes and workshops; external visits;</p> <p>Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion etc. These sessions constitute an average time per level as indicated in the table below. Scheduled sessions may vary slightly depending on the module choices you make.</p>																														
Key Information Sets Information	<p>Key Information Sets (KIS) are produced at programme level for all programmes that this module contributes to, which is a requirement set by HESA/HEFCE. KIS are comparable sets of standardised information about undergraduate courses allowing prospective students to compare and contrast between programmes they are interested in applying for.</p> <table border="1" data-bbox="459 909 1369 1301"> <thead> <tr> <th colspan="5">Key Information Set - Module data</th> </tr> </thead> <tbody> <tr> <td colspan="4">Number of credits for this module</td> <td>15</td> </tr> <tr> <th>Hours to be allocated</th> <th>Scheduled learning and teaching study hours</th> <th>Independent study hours</th> <th>Placement study hours</th> <th>Allocated Hours</th> </tr> <tr> <td>150</td> <td>36</td> <td>114</td> <td>0</td> <td>150</td> </tr> </tbody> </table> <p>The table below indicates as a percentage the total assessment of the module which constitutes a -</p> <p>Written Exam: Unseen written exam, open book written exam, In-class test Coursework: Written assignment or essay, report, dissertation, portfolio, project Practical Exam: Oral Assessment and/or presentation, practical skills assessment, practical exam</p> <p>Please note that this is the total of various types of assessment and will not necessarily reflect the component and module weightings in the Assessment section of this module description:</p> <table border="1" data-bbox="568 1704 1262 1935"> <thead> <tr> <th colspan="2">Total assessment of the module:</th> </tr> </thead> <tbody> <tr> <td>Written exam assessment percentage</td> <td>50%</td> </tr> <tr> <td>Coursework assessment percentage</td> <td>50%</td> </tr> <tr> <td>Practical exam assessment percentage</td> <td>0%</td> </tr> <tr> <td></td> <td>100%</td> </tr> </tbody> </table>	Key Information Set - Module data					Number of credits for this module				15	Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours	150	36	114	0	150	Total assessment of the module:		Written exam assessment percentage	50%	Coursework assessment percentage	50%	Practical exam assessment percentage	0%		100%
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Reading Strategy	All students will be encouraged to make full use of the print and electronic resources available to them through membership of the University. These include a range of																														

	<p>electronic journals and a wide variety of resources available through web sites and information gateways. The University Library's web pages provide access to subject relevant resources and services, and to the library catalogue. Many resources can be accessed remotely. Students will be presented with opportunities within the curriculum to develop their information retrieval and evaluation skills in order to identify such resources effectively.</p> <p>Any essential reading will be indicated clearly, along with the method for accessing it, e.g. students may be expected to purchase a set text, be given or sold a print study pack or be referred to texts that are available electronically, etc. This guidance will be available either in the module handbook, via the module information on Blackboard or through any other vehicle deemed appropriate by the module/programme leaders.</p> <p>If further reading is expected, this will be indicated clearly. If specific texts are listed, a clear indication will be given regarding how to access them and, if appropriate, students will be given guidance on how to identify relevant sources for themselves, e.g. through use of bibliographical databases.</p>
Indicative Reading List	<p>The following book is recommended for purchase by students as it covers the majority of aspects of the course:</p> <p>Willey, J.M., Sherwood, L.M., Woolverton, C.J. (2011) <i>Prescott's Microbiology</i>; 8th ed. New York:McGraw-Hill.</p> <p>The library holds several copies of this textbook. . Copies of earlier editions are also available.</p> <p>Students are also advised to consult other useful microbiology textbooks, such as:</p> <p>Baker, S., Griffiths, C., Nicklin, J. (2011) <i>BIOS Instant Notes Microbiology</i>, 4th ed. New York and London: Garland Science.</p> <p>Madigan, M.T., Matinko, J.M. (2009) <i>Brock Biology of Microorganisms</i>. 12th ed.; San Fransisco: Benjamin-Cummings..</p> <p>Harper, D.R. (2012) <i>Viruses-Biology/Applications/Control</i>. New York: Garland Science</p> <p>Irving, W., Boswell, T., Ala'Aldeen (2005) <i>BIOS Instant Notes Medical Microbiology</i>. New York: Garland Science.</p> <p>Strelkauskas, A., Strelkauskas, J., Moszyk-Strelkauskas, D. (2010) <i>Microbiology, a clinical approach</i>. New York: Garland Science.</p> <p>Additional useful texts on microbiology and microorganisms can be accessed in the library at shelf mark 579</p>

Part 3: Assessment

Assessment Strategy	<p>The controlled component is a written exam to be held during the Summer Assessment Period. The exam will be 2 hours duration which is consistent with the Department's assessment strategy for Level 2 modules. This assessment will provide students with an opportunity to demonstrate both their knowledge on a broad range of topics through a series of short answer questions, and more in-depth knowledge though a selection of medium length questions. This assessment will test a range of the learning outcomes and will provide a valuable learning experience through recalling and demonstrating knowledge which will be of benefit when progressing to final year modules.</p> <p>The coursework comprises two elements:</p>
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	<p>The first is a researched essay which will require students to complete a 1500 word written account on an aspect of microorganisms. This assessment will test a range of learning outcomes and will provide a valuable learning experience through applying knowledge and supporting this through the published literature.</p> <p>The second element is a contemporaneous laboratory record, which students will be required to complete and maintain as they work through the practical programme. This will require data collection, handling and interpretation, experimental planning and the application of learning from the lecture material in experimental design in addition to discussion of results. The ability to maintain an accurate laboratory record is a fundamental skill for biological scientists.</p> <p>Opportunities for formative assessment and feedback are built into the tutorial sessions, through discussion of current research, the evaluation of research methods, and review of past exam papers. Students are provided with formative feed-forward for their exam through a revision and exam preparation session prior to the exam and through the extensive support materials supplied through Blackboard.</p> <p>All work is marked in line with the Department's Generic Assessment Criteria and conforms with university policies for the setting, collection, marking and return of student work. Assessments are described in the Module handbook that is supplied at the start of module.</p>
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Identify final assessment component and element		
% weighting between components A and B (Standard modules only)	A: 50	B: 50
First Sit		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. Written Examination (2 hours)	100	
Component B Description of each element	Element weighting (as % of component)	
1. Essay (1500 words)	75%	
2. Laboratory Report	25%	

Resit (further attendance at taught classes is not required)		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. Written Examination	100%	
Component B Description of each element	Element weighting (as % of component)	
1. Essay (1500 words)	75%	
2. Data Interpretation Exercise	25%	
If a student is permitted an EXCEPTIONAL RETAKE of the module the assessment will be that indicated by the Module Description at the time that retake commences.		