



ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data					
Module Title	Practical Skills for Biomedical Science				
Module Code	USSJYS-15-M	Level	M	Version	1
UWE Credit Rating	15	ECTS Credit Rating	7.5	WBL module?	No
Owning Faculty	Health and Applied Sciences	Field	Applied Sciences		
Department	Biological Biomedical and Analytical Sciences	Module Type	Standard		
Contributes towards	MSc Biomedical Science and all associated named routes				
Pre-requisites	None	Co- requisites	None		
Excluded Combinations	None	Module Entry requirements	None		
First CAP Approval Date	2 nd February 2016	Valid from	September 2016		
Revision CAP Approval Date		Revised with effect from			

Review Date	~ 5 years post approval for PSRB requirements
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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"> • demonstrate a range of practical laboratory skills (Components A & B1 & B2) • produce a written practical report to the standard expected of a masters level student (Component B1) • demonstrate the appropriate application of simple statistical analysis to a data set generated in the laboratory setting (Component B1) • present a poster of their practical report to the norms of a scientific conference poster presentation (Component A) • understand their need to demonstrate competency of practical skills, and have assessed their own and others (Component B2)
Syllabus Outline	<p>Practical skills that will be covered include but are not limited to</p> <ul style="list-style-type: none"> • pipetting – accuracy and precision, especially with small volumes • making solutions – with underlying principles of molarity, pH, buffering • preparations of serial dilutions • aseptic technique • basic tissue culture skills • basic microtomy and histological slide preparation • staining techniques in microbiology, haematology and cellular pathology • PCR and related techniques • Safe operation of a range of basic laboratory equipment – including awareness of

	<p>health and safety related to the equipment</p> <ul style="list-style-type: none"> • Clearing away and disposal processes for research laboratories • Application of mathematics and statistics as appropriate to the practical task • Working to own limits of practice and competency assessment <p>Practicals will be designed to include several techniques in each session to prepare students for their project module that follows. Laboratory etiquette and good practice will be emphasised throughout sessions.</p>
Contact Hours	12x3 hours of practicals (36 hours)
Teaching and Learning Methods	<p>This module is a practical module, and all teaching activity will be laboratory based, with supporting material given orally during practicals and supporting documents and videos being provided on the VLE that supports the module.</p> <p>As students on this module will have a range of abilities dependent on their undergraduate experience (and work experience where relevant) practicals are designed to enable student to work at their own pace, but to ensure that by the end of the module all students have reached a level of competency in the range of practical skills covered.</p> <p>Students will also be involved in the assessment of their own and each other's competency in a basic laboratory technique.</p>
Key Information Sets Information	Not applicable for level M programmes/modules
Reading Strategy	<p>At Masters level students are expected to demonstrate the ability to find information, assess its relevance and utilise it in their studies in an independent manner; however the programme team recognise that students entering the programme may be at different levels of the development of the skills required to undertake this successfully. Therefore module leaders will provide you with a starting point in terms of core readings and the lecture material will also give you a strong starting point. However it is in the area of further reading that you need to show the independence of skills and of knowledge development, so you will need to find the further readings yourself. However, the skills required to do this are covered during the early stages of the course, during induction week you will have a library induction session, and in the Research and Diagnostic Methodologies module (USSJYT-30-M) that you take during the first semester we will cover how to undertake a literature search and how to assess and use the material you find appropriately. The programme tutorials will provide opportunities for you to further develop these skills and to ask any questions that you have. Further support and guidance is available through the library which runs workshops that you can sign up to, and also has advice in its website.</p> <p>Module leaders will give you a clear indication of any essential reading, and point you towards the appropriate textbooks and journals for their discipline. This will usually be in the form of a reading list in the module guide; the indicative list on this module specification is as it states indicative as the relevant available books and journals can change regularly – and the module specification is a document written only once when a module is modified and can last for many years. So it is important that you refer to the reading list for your specific year group as the definitive document.</p> <p>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 electronic journals and a wide variety of resources available through web sites and</p>

	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. .
Indicative Reading List	<p>Selected Texts – Current Editions of:</p> <p>The module will be primarily supported by worksheets given to the students – for their reports they will then undertake online literature searches to support their write-ups with information from the primary literature. The following books would be supportive of the basic information required.</p> <p>Glencross, H., Ahmed, N. and Wang, Q. (2011) <i>Biomedical Science Practice: Experimental and Professional Skills</i>. Oxford: Oxford University Press</p> <p>Scott, I. and Spouse, J. (2013) <i>Practice-Based Learning in Nursing, Health and Social Care: Mentorship, Facilitation and Supervision</i>. Online: Wiley-Blackwell</p> <ul style="list-style-type: none"> - E-textbook available through library – chapter 9 of relevance to the DOPS assessment.

Part 3: Assessment	
Assessment Strategy	<p>The MSc BMS Programme has a programme level assessment strategy (see Programme Specification appendix 1), and all modules have their assessments designed to relate to that document. For parity across all routes the specialist subject modules on the MSc BMS programme have a 50:50 weighting of course work to final exam – this module is one of the specialist modules. Therefore the coursework has been designed in line with the programme assessment strategy.</p> <p>As this is a core module the assessments are taken by all students on the programme. The poster presentation is a core skill for early career scientists. The DOPS (direct observation of practical skills) assessment is a training and education associated skill that early career biomedical scientists in the NHS need to be practiced in. The practical report provides the students with the opportunity to practice the skill set required for the final project report and receive feedback on those skills before writing the final project report.</p> <p>The assessments are marked to the BBAS standard PG marking criteria, and students are full briefed on the assessment both in writing and through a tutorial session. Students also develop several transferable skills during this assessment including negotiation (they are allowed to pick their own title and refine it), critiquing of published literature, scientific writing etiquette, and editing documents to a high editorial standard.</p>

Identify final assessment component and element	Component A	
% weighting between components A and B (Standard modules only)	A:	B:
	30	70
First Sit		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. Poster presentation of practical experiment (20 minutes including defence)	100	
Component B Description of each element	Element weighting (as % of component)	

1. Written report of practical experiment (1500 words)	60
2.DOPS (direct observation of practical skills) report (1000 words)	40

Resit (further attendance at taught classes is not required)

Component A (controlled conditions) Description of each element	Element weighting (as % of component)
1. Poster presentation of practical experiment (20 minutes)	100
Component B Description of each element	Element weighting (as % of component)
1. Written report of practical experiment (1500 words)	60
2. DOPS (direct observation of practical skills) report (1000 words)	40

If a student is permitted a retake of the module under the University Regulations and Procedures, the assessment will be that indicated by the Module Description at the time that retake commences.