



MODULE SPECIFICATION

Part 1: Information			
Module Title	Contemporary Advances in Ultrasound Technology		
Module Code	UZZY8Q-15-M	Level	M
For implementation from	January 2020		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Health and Life Sciences	Field	Allied Health Professionals
Department	HAS		
Contributes towards	MSc In Medical Ultrasound		
Module type:	Project		
Pre-requisites	Fundamentals of Ultrasound Technology		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>The module will consist of a mixture of lectures and practical workshops and will explore and address issues relating to new technology and quality assurance. You will be expected to contribute to discussions based on your own knowledge and experiences, recognise gaps in your knowledge and understanding and investigate these areas by asking questions and reading around the subject, particularly current published studies.</p> <p>Typically, this module will cover:</p> <ul style="list-style-type: none"> • Contemporary Advancements • Developments in digital signal processing and imaging- spatial and frequency compound imaging • Non-linear propagation of ultrasound – principles and tissue harmonic imaging • Developments in transducer technology and array designs – 3D and 4D ultrasound • Contrast Enhanced Ultrasound (CEUS) - principles and micro bubble contrast agents • Elastography • High intensity focused ultrasound (HIFU) • Microbubble assisted delivery of drugs and genes • Advances in Doppler techniques - clinical applications • Quality Control and Performance Checks - acceptance testing and phantoms.

Part 3: Assessment: Strategy and Details		
Component A:		
3000 word written assignment.		
Rationale:		
<p>This assessment for this module is designed for the student apply the principles of ultrasound technology to clinical practice. The written assignment will assess the application of basic physical principles in the design of an investigation, in addition to literature searching and essay writing skills. The assignment will assess the students' understanding of the application of technology to current and future practice, and critically reflect on the process. This will require the student to demonstrate an awareness of issues within the field, by keeping abreast of current developments through reading and evaluating.</p> <p>This form of assessment will enhance the student's perception of the importance and relevance of contemporary advances of diagnostic ultrasound and relate this to clinical practice and will also facilitate the demonstration of higher order cognitive skills such as synthesis and critical analysis in their report.</p>		
Formative Assessment:		
Students will have the opportunity to engage in an assessment workshop and discuss their planned areas of investigation with peers and academic staff.		
Identify final timetabled piece of assessment (component and element)	Component A	
% weighting between components A and B (Standard modules only)	A:	B:
First Sit		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. 3000 word written assignment	100	
Resit (further attendance at taught classes is not required)		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. 3000 word written assignment	100	
Part 4: Learning Outcomes & KIS Data		
Learning Outcomes	<p>On successful completion of this module students will be able to:</p> <ul style="list-style-type: none"> • Demonstrate in depth and critical knowledge and understanding of contemporary advances in ultrasound technology • Critically evaluate relevant knowledge to enable optimum use of the ultrasound equipment within the current, internationally recognised recommendations for safe practice • Design and critically evaluate a relevant investigation. <p>All learning outcomes are assessed through Component A.</p>	

Key Information Sets Information (KIS) Contact Hours	<table border="1" data-bbox="496 412 1409 799"> <thead> <tr> <th colspan="5" data-bbox="496 412 1409 450">Key Information Set - Module data</th> </tr> <tr> <td data-bbox="496 450 635 495"></td> <td data-bbox="635 450 799 495"></td> <td data-bbox="799 450 963 495"></td> <td data-bbox="963 450 1128 495"></td> <td data-bbox="1128 450 1409 495"></td> </tr> </thead> <tbody> <tr> <td data-bbox="496 495 635 568"><i>Number of credits for this module</i></td> <td data-bbox="635 495 799 568"></td> <td data-bbox="799 495 963 568"></td> <td data-bbox="963 495 1128 568"></td> <td data-bbox="1128 495 1409 568" style="text-align: right;">15</td> </tr> <tr> <th data-bbox="496 568 635 723">Hours to be allocated</th> <th data-bbox="635 568 799 723">Scheduled learning and teaching study hours</th> <th data-bbox="799 568 963 723">Independent study hours</th> <th data-bbox="963 568 1128 723">Placement study hours</th> <th data-bbox="1128 568 1409 723">Allocated Hours</th> </tr> <tr> <td data-bbox="496 723 635 799" style="text-align: center;">150</td> <td data-bbox="635 723 799 799" style="text-align: center;">36</td> <td data-bbox="799 723 963 799" style="text-align: center;">114</td> <td data-bbox="963 723 1128 799" style="text-align: center;">0</td> <td data-bbox="1128 723 1409 799" style="text-align: center;">150</td> </tr> </tbody> </table>					Key Information Set - Module data										<i>Number of credits for this module</i>				15	Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours	150	36	114	0	150
Key Information Set - Module data																														
<i>Number of credits for this module</i>				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	<p data-bbox="376 898 1517 958">The table below indicates as a percentage the total assessment of the module which constitutes a;</p> <p data-bbox="376 987 979 1016">Written Exam: Unseen or open book written exam</p> <p data-bbox="376 1021 1509 1050">Coursework: Written assignment or essay, report, dissertation, portfolio, project or in class test</p> <p data-bbox="376 1055 1473 1115">Practical Exam: Oral Assessment and/or presentation, practical skills assessment, practical exam (i.e. an exam determining mastery of a technique)</p> <table border="1" data-bbox="608 1144 1302 1375"> <thead> <tr> <th colspan="2" data-bbox="608 1144 1302 1218">Total assessment of the module:</th> </tr> </thead> <tbody> <tr> <td data-bbox="608 1218 1161 1256">Written exam assessment percentage</td> <td data-bbox="1161 1218 1302 1256" style="text-align: center;">100%</td> </tr> <tr> <td data-bbox="608 1256 1161 1294">Coursework assessment percentage</td> <td data-bbox="1161 1256 1302 1294" style="text-align: center;">0%</td> </tr> <tr> <td data-bbox="608 1294 1161 1332">Practical exam assessment percentage</td> <td data-bbox="1161 1294 1302 1332" style="text-align: center;">0%</td> </tr> <tr> <td data-bbox="608 1332 1161 1375"></td> <td data-bbox="1161 1332 1302 1375" style="text-align: center;">100%</td> </tr> </tbody> </table>					Total assessment of the module:		Written exam assessment percentage	100%	Coursework assessment percentage	0%	Practical exam assessment percentage	0%		100%															
Total assessment of the module:																														
Written exam assessment percentage	100%																													
Coursework assessment percentage	0%																													
Practical exam assessment percentage	0%																													
	100%																													
Reading List	<p data-bbox="376 1473 1449 1534">https://rl.talis.com/3/uwe/lists/95653110-FE7E-6A23-FD48-83CD36C110A1.html?lang=en-GB&login=1</p>																													