

CORPORATE AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data						
Module Title	Applied Respiratory and Sleep Physiology					
Module Code	USSJYC-30-3		Level	3	Version	1
Owning Faculty	HLS		Field	Applied Sciences		
Contributes towards	BSc. (Hons) Healthcare Science (Physiological Sciences) Respiratory & Sleep Physiology					
UWE Credit Rating	30	ECTS Credit Rating	15	Module Type	Standard	
Pre-requisites	Respiratory and Sleep Physiology A and B (Level 2) [USSJY9-20-1 and USSJYA-20-2]		Co- requisites			
Excluded Combinations			Module Entry requirements			
Valid From	September 2012		Valid to	September 2018		

CAP Approval Date	16 May 2012
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Part 2: Learning and Teaching	
Learning Outcomes	<p>On successful completion of this module the student will:</p> <ol style="list-style-type: none"> 1. Explain in detail the underpinning basic and clinical science with respect to: <ul style="list-style-type: none"> • Blood Gas Analysis– Invasive and Non-Invasive • Respiratory Sleep Studies including the neurological aspects of sleep 2. Evaluate the principles, concepts and basic operation of continuous positive airway pressure equipment and modalities. 3. Evaluate the application of overnight oximetry. 4. Explain the effects of age on blood gas and sleep assessments in clinical practice. <p>All Learning Outcomes assessed via component A, the focus of the case-study (component B) will alter year on year but will reflect one or more of the Learning Outcomes listed above.</p> <p>In addition the educational experience may explore, develop, and practise <u>but not formally discretely assess</u> the following Professional aspects, as set out within the Modernising Scientific Careers Curriculum:</p> <ol style="list-style-type: none"> 1. Respect and uphold the rights, dignity and privacy of patients. 2. Establish patient-centred rapport. 3. Appreciate the empathy and sensitivity needed when dealing with the patient experience of long-term conditions and terminal illness. 4. Actively seek accurate and validated information from all available sources with respect to respiratory and sleep investigations. 5. Select and apply appropriate analysis or assessment techniques and tools. 6. Critically discuss the problems associated with the care of patients undergoing respiratory investigations or treatments.

Syllabus Outline	<p>Indicative Content</p> <p>Blood gas measurement</p> <ul style="list-style-type: none"> • Physiological processes that contribute to the maintenance of normal • Blood gases • Gas exchange • Gas transport • Acid base balance and blood gases • Safety procedures • Characteristics and function of analysers • Sampling procedures – arterial versus capillary • Normal values • Application in Clinical Practice – Acute and Chronic care, LTOT assessments and shunt testing • Interpretation of results in clinical practice <p>Sleep Studies</p> <ul style="list-style-type: none"> • Sleep physiology including neurological aspects of sleep • Sleep pathophysiology – International Classification of Sleep Disorders • Lung function and sleep • Sleep-Breathing Disorders – including obstructive sleep apnoea • Overnight oximetry <ul style="list-style-type: none"> o Characteristics of recording equipment o Indications o Contra-Indications o Recommended measurement technique o Common problems o Normal values • Airflow and respiratory effort in sleep • Assessment of “Sleep” • Sleepiness and Fatigue Scales and assessments • Indications for limited (semi) and full polysomnography • Indications for Continuous Positive Airway Pressure therapy <ul style="list-style-type: none"> o Machines - Function/types/modalities o Cleaning & filter changing o Mask/interface types o Contraindications o Side effects/troubleshooting o Patient education • Indications for other treatments – Mandibular Advancement Device, Non-Invasive Ventilation • Driver and Vehicle Licensing Agency regulations
Contact Hours/Scheduled Hours	<ul style="list-style-type: none"> • The student will have a minimum of 6 hours per week contact time over the course of semester 1. The module will be delivered by specialist practitioners within the work-place setting and will comprise lectures, seminars, tutorials, practicals, and observation as appropriate to the module content at the time. The teaching will take place within the University Hospitals Bristol Respiratory and Sleep departments and University Hospitals Bristol Education Centre.
Teaching and Learning Methods	<p>Students are expected to spend 72 hours on scheduled learning and 228 hours on independent learning.</p> <p>Independent learning will take the following forms with an approximate indication of time required for each:</p> <p>Essential reading to support acquisition of knowledge relating to lectures and practical exercises – 96 hours</p> <p>Researching case studies, including accessing VLE scenarios such as ‘Virtual Patient’ – 30 hours</p> <p>Observational learning and discussions within the BRI or ‘home’ placement setting –</p>

	<p>20 hours Preparation and submission of assessment – 10 hours Revision and preparation for exam – 72 hours</p> <p>Scheduled learning includes lectures, seminars, tutorials, demonstration, practical classes and workshops; work based learning.</p> <p>Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion etc.</p>
Reading Strategy	<p>Students will be expected to purchase any core text recommended, access to the core text will also be provided for reference via the library, but is not expected to negate the need for the student to provide their own copy. Students will be expected to access all other essential reading either via handouts provided or online through the library, Blackboard, or other recommended source (typically free access e-journal). Wherever possible, where free online access is not available digitalised copies of book chapters or articles will be provided.</p> <p>All students are encouraged to read widely using the library catalogue, a variety of bibliographic and full text databases and Internet resources. Many resources can be accessed remotely. Guidance to some key authors and journal titles available through the Library will be given in the Module Guide and updated annually. Assignment reference lists are expected to reflect the range of reading carried out.</p> <p>Students are expected to be able to identify and retrieve appropriate reading. This module offers an opportunity to further develop information skills introduced at Level 1. Students will be given the opportunity to attend the GDP sessions on selection of appropriate databases and search skills. Additional support is available through the Library Services web pages, including interactive tutorials on finding books and journals, evaluating information and referencing. Sign up workshops are also offered by the Library.</p>
Indicative Reading List	<p><i>The following list is offered to provide validation panels/accrediting bodies with an indication of the type and level of information students may be expected to consult. As such, its currency may wane during the life span of the module specification. However, as indicated above, CURRENT advice on readings will be available via other more frequently updated mechanisms.</i></p> <p>Cotes JE, Chinn DJ, Miller MR (2006) Lung Function, 6th Ed. Blackwell Publishing</p> <p>Gibson GJ (2009). Clinical Tests of Respiratory Function, 3rd Ed. Hodder Arnold</p> <p>Hughes M (2010) Physiology & Practice of Pulmonary Function. Association of Respiratory Technology & Physiology</p> <p>Lumb AB (2010). Nunn's Applied Respiratory Physiology, 7th Ed. Churchill Livingstone</p> <p>Maskell N, Millar A (2009). Oxford Desk Reference: Respiratory Medicine. OUP</p> <p>Ruppel GL (2003) Manual of Pulmonary Function Testing. 8th Ed, Mosby</p> <p>The ARTP Practical Handbook of Respiratory Function Testing - Part 1. (2003) Second edition. Association of Respiratory Technology & Physiology</p> <p>The ARTP Practical Handbook of Respiratory Function Testing - Part 2. (2005) Second edition. Association of Respiratory Technology & Physiology</p> <p>West J.B. (2012) Respiratory Physiology The Essentials. Ninth Edition. Lippincott Williams & Wilkins</p> <p>Wilson S, & Nutt D. (2008) Sleep Disorders. OUP</p> <p>Journals</p> <p>Respiration Physiology</p>

	Thorax Chest European Respiratory Journal Therapeutic Advances in Respiratory Disease Respiratory Medicine Journal of Sleep Research Sleep and Breathing
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Part 3: Assessment	
Assessment Strategy	<ul style="list-style-type: none"> • Component A (controlled) will take the form of an end of module summative exam. The exam will explore the student's ability to discuss, evaluate and synthesise materials and topics covered during the course of the module. • Component B coursework will take the form of an integrated case-study. • Opportunities for formative assessment will occur throughout the module to check students' grasp of content. The nature of the formative assessment will be designed to ensure student familiarity with the summative assessment styles. • The generic assessment criteria used in the Department of Applied Sciences, and made available to students, will be used for all assessments.

Identify final assessment component and element	Component A, element 1	
% weighting between components A and B (Standard modules only)	A:	B:
	60	40
First Sit		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. Exam (3 hours) [Assessment Period 1]	100	
Component B Description of each element	Element weighting (as % of component)	
1. Case-study (2000 words)	100	

Resit (further attendance at taught classes is not required)	
Component A (controlled conditions) Description of each element	Element weighting (as % of component)
1. Exam (3 hours) [Assessment Period 3]	100
Component B Description of each element	Element weighting (as % of component)
1. Case-study (2000 words)	100
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.	