



MODULE SPECIFICATION

Part 1: Information			
Module Title	Advanced Respiratory and Sleep Physiology		
Module Code	USSJYB-30-3	Level	3
For implementation from	September 2017		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Health & Applied Sciences	Field	Applied Sciences
Department	Applied Sciences		
Contributes towards	BSc (Hons) Healthcare Science (Physiological Sciences)		
Module type:	Standard		
Pre-requisites	USSKAY-30-2 Respiratory & Sleep Physiology & Pathophysiology A USSKBA-30-2 Respiratory & Sleep Physiology & Pathophysiology B OR USSKL9-30-2 Pathophysiological Sciences A USSKLA-30-2 Pathophysiological Sciences B		
Excluded Combinations	N/A		
Co-requisites	USSJYC-30-3 Applied Neurophysiology, Respiratory and Sleep Physiology		
Module Entry requirements	Level 5 (or equivalent) physiological sciences qualification		

Part 2: Description
<p>This module explores advanced topics on blood gas measurement and sleep studies. Indicative contact includes:</p> <p>A. Review, physiology, inflammatory mechanisms and basic immunology of relevance to the key topics</p> <p>B. Airway Challenge Testing</p> <ul style="list-style-type: none"> • Pharmacology and mechanism of action of - mannitol, methacholine, and histamine • Mechanisms of action of – cold air and of exercise of airway function • Methods for assessing airway reactivity – chemical, cold air, exercise and hyperventilation • Indications and contra-indications for testing • Safety precautions and safe handling of reagents • Presentation of results <p>C. Allergy testing</p> <ul style="list-style-type: none"> • Immunological mechanisms associated with allergy testing • Skin Prick Testing • Patch Testing

D. Invasive and Non-invasive Blood Gas Measurement

- Review of the physiological pathways contributing to maintenance of normal blood gases - a) gas exchange, b) gas transport and c) acid-base balance and d) blood gases
- Characteristics and function of invasive blood gas analysers and non-invasive blood gas measurement systems (pulse oximetry and transcutaneous measurements)
- Comparison of invasive and non-invasive blood gas measurements in clinical practice
- Normal values
- Application on invasive and non-invasive blood gases in - Acute and Chronic care, LTOT assessments Shunt testing, Exercise Testing, Interpretation of results in clinical practice

E. Respiratory Muscle Assessment

- Mouth pressures
- Sniff pressures
- Cough PEF
- Supine and sitting vital capacity (VC)

F. Overview of exercise testing techniques & pre-op assessments

- CPET
- 6MWT
- ISWT
- ESWT

Additionally, it is expected that students will integrate knowledge from both Level 3 Respiratory Physiology models in order to fully understand the scientific basis and diagnosis of respiratory and sleep conditions.

There will be block of contact time at UWE. Included in each block week are laboratory workshops, lectures and tutorials. The contact time will equate to approximately 15 hours per block (a total of 75 hours).

Theoretical material within the module will be presented to the students in the form of lectures throughout the block periods in each of the semesters in the academic year. The learning of lecture content will be reinforced through tutorials and time spent in independent learning by the directed reading of recommended texts and through the use of technology enhanced learning resources that will be provided online.

A number of relevant practical sessions will be incorporated during the campus based blocks in addition to the work based learning that must be achieved under supervision by a workplace supervisor. Practical sessions will both drive hands on learning and the acquisition of technical skills at both an individual and group working level.

The remainder of the independent learning time allocated to the module should be spent preparing for assessments [B1], and undertaking revision for the in-class assessment [A1].

Scheduled learning includes lectures, seminars, tutorials, project supervision, demonstration, practical classes and workshops; fieldwork; external visits; work based learning; supervised time in studio/workshop.

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.

Part 3: Assessment

The assessments within this module have been designed to show that the student has developed the required knowledge and clinical skills required to practice as a respiratory and sleep physiologist or neurophysiologist, as appropriate. There will two components to the assessment of this module.

Component A will comprise an in class assessment conducted under controlled conditions. This will assess a broad knowledge base and focus on data interpretation of clinical scenarios and case based material.

Component B will comprise of an integrated case-study.

Formative feedback is available to students throughout the module through group discussions, and in workshops. 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.




All work is marked in line with the Faculty's Generic Assessment Criteria and conforms to university policies for the setting, collection, marking and return of student work. Where an individual piece of work has specific assessment criteria, this is supplied to the students when the work is set.

This assessment strategy has been designed following best practice on effective assessment from JISC (<http://www.jisc.ac.uk/whatwedo/programmes/elearning/assessment/digiassess.aspx>) and The Open University's Centre for Excellence in Teaching and Learning (<http://www.open.ac.uk/opencetl/centre-open-learning-mathematics-science-computing-and-technology/activities-projects/e-assessment-learning-the-interactive-comp>).

Technical design and deployment of the activities will also follow best practice developed at UWE by the Education Innovation Centre in collaboration with academic colleagues across the university. Staff guidance and support are already in place (<http://info.uwe.ac.uk/online/Blackboard/staff/guides/summative-assessments.asp>).

Identify final timetabled piece of assessment (component and element)	A1	
% weighting between components A and B (Standard modules only)	A:	B:
	50	50
First Sit		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. In class assessment (3 hours)	100%	
Component B Description of each element	Element weighting (as % of component)	
1. Integrated case-study	70%	
2. Oral presentation	30%	
Resit (further attendance at taught classes is not required)		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. In class assessment (3 hours)	100%	
Component B Description of each element	Element weighting (as % of component)	
1. Integrated case-study	70%	
2. Oral presentation	30%	

Part 4: Teaching and Learning Methods

Learning Outcomes	<p>On successful completion of this module the student will:</p> <p>(relevant assessment component is listed in brackets after each LO)</p> <ol style="list-style-type: none"> 1. Review respiratory physiology investigations and apply this knowledge to typical clinical scenarios. (A +B1&2) 2. Discuss in detail the underpinning basic and clinical science with respect to key areas (A + B 1&2): 3. Evaluate the mode of action and application of key pharmacological and non-pharmacological treatments for disorders assessed in the key areas. (A + B1&2) 4. Use a wide range of contemporary literature and guidelines to discuss and evaluate clinical practice in a range of relevant settings (B1&2). 5. Effectively communicate clinical and scientific concepts (A + B 1&2). <p>Students are expected to integrate knowledge from this module with that of USSJYC-30-3 in order to develop a comprehensive understanding of the subject matter.</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> <ul style="list-style-type: none"> • Respect and uphold the rights, dignity and privacy of patients. • Establish patient-centred rapport. • Appreciate the empathy and sensitivity needed when dealing with the patient experience of long-term conditions and terminal illness. • Actively seek accurate and validated information from all available sources with respect to respiratory and sleep investigations. • Select and apply appropriate analysis or assessment techniques and tools. • Critically discuss the problems associated with the care of patients undergoing respiratory investigations or treatments. 																									
Key Information Sets Information (KIS)	<table border="1"> <thead> <tr> <th colspan="6">Key Information Set - Module data</th> </tr> </thead> <tbody> <tr> <td colspan="5"><i>Number of credits for this module</i></td> <td style="border: 2px solid black;">30</td> <td></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> <th></th> </tr> <tr> <td style="text-align: center;">300</td> <td style="text-align: center;">75</td> <td style="text-align: center;">225</td> <td style="text-align: center;">0</td> <td style="text-align: center;">300</td> <td style="text-align: center;"></td> </tr> </tbody> </table>	Key Information Set - Module data						<i>Number of credits for this module</i>					30		Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours		300	75	225	0	300	
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Contact Hours	<p>The table below indicates as a percentage the total assessment of the module which constitutes a;</p> <p>In class assessment: Unseen or open book written exam Coursework: Written assignment or essay, report, dissertation, portfolio, project or in class test Practical Exam: Oral Assessment and/or presentation, practical skills assessment, practical exam (i.e. an exam determining mastery of a technique)</p>																									

Total Assessment	Total assessment of the module:					
	In class assessment assessment percentage				50%	
	Coursework assessment percentage				50%	
	Practical exam assessment percentage				0%	
				100%		
Reading List	<p>Modernising Scientific Careers Programme Training Manual for appropriate Division and Specialist Route. Available from http://www.nshcs.hee.nhs.uk/curricula</p> <p>The module reading list can be accessed through the following link:</p> <p>https://uwe.rl.talis.com/lists/BAD127A2-4A55-B0FE-2F34-6EC0EB3CEAF9.html</p>					

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First CAP Approval Date	1/5/2012			
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