



CORPORATE AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data					
Module Title	Introduction to Physiological Sciences and Patient Care				
Module Code	USSKA9-30-1	Level	1	Version	1
Owning Faculty	Health and Applied Sciences	Field	BBAS		
Contributes towards	BSc Healthcare Sciences (Physiological Sciences)				
UWE Credit Rating	30	ECTS Credit Rating	15	Module Type	Standard
Pre-requisites	None		Co- requisites	None	
Excluded Combinations	None		Module Entry requirements	N/A	
Valid From	01/09/2014		Valid to	01/09/2020	

CAP Approval Date	28/03/2014
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Part 2: Learning and Teaching	
Learning Outcomes	<p>On successful completion of this module students will be able to: All L.O. assessed in both A&B</p> <ul style="list-style-type: none"> • Knowledge and Understanding <ul style="list-style-type: none"> • Demonstrate a broad basic and clinical sciences knowledge and apply that knowledge with respect to Cardiology, Vascular, Respiratory and Sleep Sciences. • Discuss the application of safe and effective practice in physiological measurement. • Discuss the basic principles underpinning typical investigations and procedures carried out in the diagnosis and treatment of cardiovascular and respiratory diseases. • Demonstrate an appreciation of the importance of patient-centred care including the range of needs of people with disabilities. • Discuss the importance of effective multidisciplinary team working in the investigation and treatment of relevant disorders. • Describe the structure, management and legal framework for health and social care services including local healthcare systems in the United Kingdom and funding flows. • Demonstrate an awareness of the processes involved in clinical physiology practice contributing to the identification of health care needs and the delivery of care • Associated Personal Qualities and Behaviours (Professionalism) <ul style="list-style-type: none"> • Discuss complex scientific information in ways that can be understood by patients and by practitioners in other areas.

	<ul style="list-style-type: none"> • Use correct terminology when discussing scientific issues. • Work safely in relevant areas. • Demonstrate an awareness of the role of the clinical physiologist in patient care pathways • Recognise the need to respect individuals' equality, diversity and rights. • Transferable skills <ul style="list-style-type: none"> • Reflect on own learning experiences • Explore a variety of strategies, which enable the individual to communicate effectively concerning patients and their carers
Syllabus Outline	<ul style="list-style-type: none"> • Anatomy, physiology and pathophysiology applied to Cardiology, Vascular, Respiratory and Sleep Sciences <ul style="list-style-type: none"> • The cardiac, vascular and respiratory systems • Sleep wake cycle and common sleep disorders • Overview of the pathophysiology of key body systems related to physiological sciences • Application of safe and effective clinical practice in physiological measurement <ul style="list-style-type: none"> • Risk management • Infection control • Team working • Partners in the management of disease • Patient-centred care • Disability including learning disabilities • Children and adults • Communication skills • Team Working • Introduction to Cardiac Physiology <ul style="list-style-type: none"> • Investigations and procedures carried out in the diagnosis and treatment of cardiac disease • Characteristics of recording equipment and their evaluation • Basic cardiac electrophysiology • Recognition and interpretation of normal ECG waveforms • Control of the circulation • Cardiac embryology and foetal heart development • The relationship between atherosclerosis and cardiovascular disease • Heart failure and its effect on the cardiovascular and other body systems • Introduction to Respiratory and Sleep Science <ul style="list-style-type: none"> • Anatomy and physiology of the respiratory system, and central and autonomic nervous systems • Control of respiration during sleep • Control of sleep wake cycle • Pathophysiology of lung diseases • Pharmacology and therapeutics • Investigations and procedures carried out in the diagnosis and

treatment of respiratory disease including sleep disorders

- Methods of sterilisation and disinfection
- Physiological measurement systems in the evaluation of lung function
- Dynamic lung volumes and transfer factors: mechanics and measurement
- Physiological measurement systems used to measure respiration during sleep
- Calculation of reference values
- Calibration and quality control procedures
- Communicable disease and microbiological hazards in the respiratory laboratory
- Introduction to Vascular Science
 - Anatomy of the vasculature; characteristics of blood flow
 - Diseases of the vascular system
 - Investigations and procedures carried out in the diagnosis and treatment of vascular disease
 - Characteristics of recording equipment and their evaluation
 - Ultrasound and physiological measurement systems in the evaluation of the vascular system
 - Common abbreviations and units
- Patient Management
 - To include an understanding of patient presentation, physiological examinations that may be required and an understanding of specific patient needs and care;
 - Respiratory disorders
 - Circulatory disorders
 - Non-Cardio-Respiratory disorders
 - Age-specific needs
 - Disability needs – communication passports
 - Carer needs
- Professional skills
 - Infection control,
 - Ethics and confidentiality
 - Health and safety (patient, personal, equipment)
 - Fitness to practice
 - Quality, risk and audit
 - Record keeping
 - O2 management
 - Patient observations/management
 - Recognising the deteriorating patient and when to intervene
- Personal Development
 - Communication and listening skills relevant to effective clinical practice.
 - Awareness of patient needs and rights as an individual to include:

	<p>Informed consent, Equality rights and diversity, Human dignity/privacy, Patient psychology, cultural differences.</p> <ul style="list-style-type: none"> • Recognise professional responsibilities with respect to children and vulnerable adults • Managing violence and aggression, awareness of triggers and body language.
<p>Contact Hours</p>	<p>The contact hours (72) are distributed as follows:</p> <p>36 hours of lectures 36 hours of practicals/observational visits</p> <p>The student will have a minimum of 2 hours per week contact time over the two semesters. This will typically take the form of lectures alternating with practicals and observational visits in local hospital cardiac/respiratory physiology departments and tutorials. The module will be delivered by staff from across the Faculty of Health and Life Sciences drawing on the wealth of experience and knowledge across the staff base. In addition, specialist practitioners will be invited to give the profession's view and importantly we will be inviting service users and carers to offer their perspectives at key junctures, and such input will be managed via the Faculty's Service Users and Carers Involvement unit (SUCI).</p> <p>In addition to the described contact time, this material will be supported through online learning material, including online quizzes and technology enhanced lecture material.</p> <p>Independent learning: Using defined TEL strategies includes hours engaged with essential reading, data handling, statistical analysis and presentation etc.</p>
<p>Teaching and Learning Methods</p>	<p>The theoretical material will be delivered mostly as lectures reinforced by directed reading, practical activities and directed tasks. The practical work will support and extend lecture material, and may include simulation workshops and data interpretation. Tutorials and learning support may be offered at key times, as required. Blackboard will support the module, and will provide access to course documents, sample exam questions, and learning materials; there will be a focus on exploiting opportunities to use web-based support for learning.</p> <p>Independent learning: In addition to lectures and practical sessions students are expected to engage in independent reading where core textbooks, journals and online resources are highlighted. This extended reading will help support student for examination preparation. The expected time given to this aspect is 228 hours.</p>
<p>Key Information Sets Information</p>	<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>

Key Information Set - Module data

Number of credits for this module

30

Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours
300	72	228		300



The table below indicates as a percentage the total assessment of the module which constitutes a -

Written Exam: One unseen written exam

Coursework: One portfolio of laboratory worksheets (data and questions)

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:

Total assessment of the module:

Written exam assessment percentage

40%

Worksheets

60%

100%

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 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.

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.

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.

A detailed reading list will be made available through relevant channels, e.g. module handbooks, Blackboard, etc.

Indicative Reading List

Modernising Scientific Careers Programme Training Manual for appropriate Division and Specialist Route. Available from <http://www.networks.nhs.uk/nhs-networks/msc-framework-curricula/ptp>

The most recent editions of the following texts:

Noble, A. *The Cardiovascular System: Systems of the Body Series*. Edinburgh: Churchill Livingstone.

Davies, A. *The Respiratory System: Basic science and clinical conditions (Systems of*

the Body) Edinburgh: Churchill Livingstone.
 Davidovits, P. *Physics in Biology and Medicine*. Oxford: Academic Press.
 Stanfield, C.L. *Principles of Human Physiology*. Harlow: Pearson Education Ltd.
 Silverthorn, D. *Human Physiology an Integrated Approach*. Harlow: Pearson Education Ltd.
 Christe, B. L. *Introduction to biomedical instrumentation: the technology of patient care*. [online] Cambridge: Cambridge University Press. Frampton, S. B. & Charmel, P. A. *Putting patients first: best practices in patient-centered care*. [online] 2nd ed. San Francisco, CA. Jossey-BassAllen, J. and Brock, S. A. *Health care communication using personality type: patients are different!* [online] London: Routledge. Institute for Innovation and Improvement (2012) Transforming the Patient Experience, Essential Guide. http://www.institute.nhs.uk/patient_experience/guide/home_page.html
 The ARTP Practical Handbook of Respiratory Function Testing - Part 1. (2003) Second edition. ARTP
 HPC (2008) Standards of conduct, performance and ethics. Health Professions Council.

Part 3: Assessment

Assessment Strategy	The assessment will cover the broad curriculum via an examinations at the end of the second semester (based on 'lecture' material) and a portfolio of worksheets & short questions (covering the practical sessions) and reflective observations based on the student's observation of practice, used to illustrate the theoretical content of the practitioner-patient relationship.
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Identify final assessment component and element		
% weighting between components A and B (Standard modules only)	A:	B:
	40%	60%
First Sit		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. EX1 Examination (3hrs)	100%	
Component B Description of each element	Element weighting (as % of component)	
1. CW1 Portfolio	100%	

Resit (further attendance at taught classes is not required)		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. EX1 Examination (3hrs)	100%	
Component B Description of each element	Element weighting (as % of component)	
1. CW1 Portfolio	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.		