MODULE SPECIFICATION

Part 1: Information			
Module Title	Applied Cardiac Physiology		
Module Code	USSJY4-30-3	Level	Level 6
For implementation from	2020-21		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Health & Applied Sciences	Field	Applied Sciences
Department	HAS Dept of Applied Sciences		
Module type:	Standard		
Pre-requisites	Pathophysiological Sciences B 2020-21		
Excluded Combinations	None		
Co- requisites	Advanced Cardiac Physiology and Neurophysiology 2020-21		
Module Entry requirements	None		

Part 2: Description

Overview: Pre-requisites: students must have taken USSKAW-30-2 Cardiac Physiology and Pathophysiology A and USSKAX-30-2 Cardiac Physiology and Pathophysiology B or USSKL9-30-2 Pathophysiological Sciences A and USSKLA-30-2 Pathophysiological Sciences B

This module explores the clinical environment in the context of Cardiac Physiology. It will also build on earlier work to develop the themes of public health and epidemiology of cardiovascular disease, risk factors, risk assessment and primary prevention including behavioural change management.

Features: Module Entry requirements: Level 5 (or equivalent) physiological sciences qualification.

Educational Aims: In addition to the Learning Outcomes the educational experience may explore, develop, and practise but not formally discretely assess the following Professional aspects, as set out within the Modernising Scientific Careers Curriculum:

1. Respect and uphold the rights, dignity and privacy of patients.

2. Establish patient-centred rapport and demonstrate effective communications skills.

3. Appreciate the empathy and sensitivity needed when dealing with the patient experience of long-term conditions and terminal illness.

Outline Syllabus: The syllabus covers:

Titrating treatment strategies and care pathways for patients with cardiovascular disease

Anatomy, physiology, pathophysiology and pharmacology related to provocative electrocardiography, and diagnostic cardiac catheterisation

Principles and practice of invasive pressure measurement and cardiac interventions in paediatric and adult patients

Equipment and set up

Procedures and angiography

Catheter use and design, operation of equipment and safe use

Identification and measurement of intracardiac pressures (normal and abnormal) and changes associated with a range of pathological states

Haemodynamics, circulatory control and regulation of the cardiac cycle

Cardiac output control, measurements and calculations

Changes to invasive measurement and interventions associated with heart diseases

Data interpretation

Acquired heart disease and effects on circulation

Heart failure and effects on the heart and circulation

Practice and principles of provocative testing, stress testing, head-up tilt testing, Valsalva manoeuvres

Teaching and Learning Methods: Material within the module will be presented to the students in the form of lectures, clinical workshops and tutorials. These will be held in block weeks at certain points within semesters 1 and 2. The learning of lecture content will be reinforced by regular tutorials throughout the academic year, 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 clinical sessions will be incorporated during the block teaching, in addition to the work based learning that must be achieved under supervision by a workplace supervisor. Clinical sessions will drive 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, and undertaking revision for the exams.

Scheduled learning includes lectures, seminars, tutorials, clinical workshops, external visits, work based learning.

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.

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 cardiac physiologist. There will two components to the assessment of this module.

Component A will comprise of a written examination and a clinical examination. These examinations will assess a broad knowledge base, and focus on data analysis and interpretation of clinical scenarios, case based material, and demonstration of appropriate clinical skills in order to assess the understanding and application of specialist clinical knowledge.

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-learningmathematics-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).

All Learning Outcomes are 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.

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Practical Skills Assessment - Component A		20 %	Clinical exam Students must achieve a mark of 40% or above in this element in accordance with professional body requirements.
Portfolio - Component B		50 %	Integrated case study portfolio
In-class test - Component A	✓	30 %	In class assessment (3 hours)
Resit Components	**Final Assessment**	**Element weighting**	**Description**
Practical Skills Assessment - Component A		20 %	Clinical exam Students must achieve a mark of 40% or above in this element in accordance with professional body requirements.
Portfolio - Component B		50 %	Integrated case study portfolio
In-class test - Component A	✓	30 %	In-class assessment (3 hours)

Part 4: Teaching and Learning Methods

Learning Outcomes

On successful completion of this module students will achieve the following learning outcomes:

Module Learning Outcomes	Reference
Discuss the key areas of physiology, pathophysiology and pharmacology related provocative testing, and diagnostic cardiac catheterisation	MO1
Discuss the underpinning principles and practice of invasive pressure measurement and cardiac interventions.	MO2
Discuss the differences between children and adults with respect to cardiac physiology investigations and demonstrate the ability to apply this to clinical situations.	MO3
Critically evaluate the importance of patient-centred care within the relevant care pathway, and discuss the problems associated with the care of patients undergoing cardiac investigations or treatments.	MO4
Actively seek accurate and validated information from all available sources with respect to cardiac investigations.	MO5
Select and apply appropriate analysis or assessment techniques and tools.	MO6

Contact Hours

Independent Study Hours:	
Independent study/self-guided study	225
Total Independent Study Hours:	225
Scheduled Learning and Teaching Hours:	
Face-to-face learning	75
Total Scheduled Learning and Teaching Hours:	75
Hours to be allocated	300
Allocated Hours	300

Reading List

The reading list for this module can be accessed via the following link:

https://uwe.rl.talis.com/modules/ussjy4-30-3.html

Part 5: Contributes Towards

This module contributes towards the following programmes of study: