

## Liverpool John Moores University

Title: CARDIOVASCULAR AND ENVIRONMENTAL PHYSIOLOGY  
Status: Definitive  
Code: **6104SPOSCI** (123212)  
Version Start Date: 01-08-2021

Owning School/Faculty: Sport and Exercise Sciences  
Teaching School/Faculty: Sport and Exercise Sciences

Team	Leader
Nicola Hopkins	Y
Helen Jones	
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**Academic Level:** FHEQ6      **Credit Value:** 20      **Total Delivered Hours:** 38

**Total Learning Hours:** 200      **Private Study:** 162

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	22
Practical	7
Workshop	9

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Practice	ECG	ECG Interpretation	50	
Presentation	Pres	Group presentation	50	

### Aims

*The module aims to provide students with the critical thinking skills necessary to evaluate and understand the appropriate application of key cardiovascular measurement techniques and to equip students with the applied knowledge*

*necessary to interpret data collected via these techniques. In addition, the module aims to promote critical awareness of the limitations to human health and performance under various physiological stressors, and how these limitations can be overcome with appropriate adaptation strategies and interventions.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Evaluate cardiovascular data and recognise when there are abnormalities present.
- 2 Discuss the validity, reliability and utility of cardiovascular measurement techniques.
- 3 Critically analyse the limitations to performance and health, and form coping strategies when individuals and athletes are confronted with common physiological, behavioural and environmental stressors

## **Learning Outcomes of Assessments**

The assessment item list is assessed via the learning outcomes listed:

ECG interpretation	1	2
Group presentation and viva	3	

## **Outline Syllabus**

*Cardiac electrophysiology and measurement using ECG*

*Assessment of cardiac structure and function*

*Assessment of vascular structure and function*

*Exercise in the heat/cold/altitude: Performance, adaptation and interventions*

*Behavioural thermoregulation*

*Circadian adaptations and interventions: Trans-meridian travel*

*Hormones and exercise*

## **Learning Activities**

Students are expected to attend time-tabled lectures and are encouraged to utilise the available directed learning/private study time and resources made available via the virtual learning platforms. Students should seek advice from module staff and/or conduct essential reading as directed. Some of the teaching sessions will contain practical based activities where students will be required to use their analytical, statistical and problem solving skills to enhance their own learning. Students should complete the required and recommended reading to widen their knowledge, understanding and their ability to apply module material. Students will be required to evidence this in their assessments, in practical/tutorial discourse and via learning platform tasks.

## **Notes**

This module is designed to critically examine key cardiovascular measurement techniques, and to understand their application in healthy and athletic populations, as well as in the diagnosis and management of cardiovascular disease. tasks. The module also aims to develop critical awareness of the limitations to health and performance under various modifiable and non-modifiable stressors, and will examine how these limitations can be ameliorated with appropriate adaptation strategies and exercise interventions. This will be evaluated by the completion of the relevant assessment tasks. On going feedback will be provided throughout the module to support completion of assessments.