

Liverpool John Moores University

Title: PHYSIOLOGICAL RESPONSES TO ACUTE EXERCISE
Status: Definitive
Code: **4105SPOSCI** (123196)
Version Start Date: 01-08-2021

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

Team	Leader
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Academic Level: FHEQ4 **Credit Value:** 20 **Total Delivered Hours:** 54

Total Learning Hours: 200 **Private Study:** 146

Delivery Options

Course typically offered: Runs Twice - S1 & S2

Component	Contact Hours
Lecture	28
Practical	5
Workshop	20

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Laboratory Report	60	
Exam	AS2	Multiple choice exam	40	1

Aims

To develop knowledge and understanding of the basic structure and function of key physiological systems and metabolic processes and discuss how these systems and

processes respond to acute exercise.

Learning Outcomes

After completing the module the student should be able to:

- 1 Describe the basic structure and function of key physiological systems and metabolic processes
- 2 Describe how these physiological systems and metabolic processes respond to acute exercise

Learning Outcomes of Assessments

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

Laboratory Report	1	2
MCQ exam	1	2

Outline Syllabus

Basic structure and function of the central and peripheral nervous system

Basic structure and function of the Cardio-Respiratory system

Homeostatic regulation of body temperature

Basic understanding of how fluid balance is controlled

Basic structure and function of the endocrine system

Basic organisation of skeletal muscle and how muscle fibre contract

Basic knowledge of biochemistry

How proteins are formed

How carbohydrates and lipids are digested, stored and oxidised

The main energy systems

Learning Activities

Students are expected to attend time-tabled lectures and are encouraged to utilise the available directed learning/private study time to get advice from module staff and/or conduct essential reading. 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 and understanding and their ability to apply material. Students will be required to evidence this in the production of their coursework and the module examination.

Notes

The content will include both theoretical knowledge and practical skills related to a number of physiological systems and metabolic processes. This will be evaluated by

the completion of the relevant assessment tasks. This module will incorporate support strategies in an attempt to ensure student progression. This will include feed forward and feedback on assessment and personal tutorial support. This will be augmented with interactive resources that facilitate self-directed exploration of the human physiology in response to acute exercise.

The Association for Nutrition (AfN) competencies covered in this module include:

CC1a The human/ animal body and its functions, especially digestion, absorption, excretion, respiration, fluid and electrolyte balance, cardiovascular, neuro-endocrine, musculoskeletal and haematological systems, immunity and thermoregulation, energy balance and physical activity.

CC1b Mechanisms for the integration of metabolism, at molecular, cellular and whole-body levels for either human or animal systems.

CC1d Nature and extent of metabolic demand for nutrients.

CC1m Ability to carry out sample selection and to ensure validity, accuracy, calibration, precision, replicability and highlight uncertainty during collection in accordance with the basic principles of good clinical practice.

CC1n Ability to obtain, record, collate, analyse, interpret and report nutrition-related data using appropriate qualitative and quantitative research and statistical methods in the field and/or laboratory and/or intervention studies, working individually or in a group, as is most appropriate for the discipline under study.

CC1o Prepare, process, interpret and present data, using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programs for presenting data visually.