

## Liverpool John Moores University

Title: Anatomy & Exercise Physiology  
Status: Definitive  
Code: **4505SPRT** (128434)  
Version Start Date: 01-08-2021

Owning School/Faculty: Sport and Exercise Sciences  
Teaching School/Faculty: Nelson and Colne College Group

Team	Leader
Ian Sadler	

**Academic Level:** FHEQ4  
**Credit Value:** 20  
**Total Delivered Hours:** 48  
**Total Learning Hours:** 200  
**Private Study:** 152

### Delivery Options

Course typically offered: Runs Twice - S1 & S2

Component	Contact Hours
Lecture	15
Seminar	18
Workshop	15

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Written Exam (1h)	70	
Practice	Practical	Practical Skills (45-min)	30	

### Aims

*The module aims to introduce students to fundamental anatomy and physiology concepts with a specific application to sport and exercise. The students will develop an understanding of the structure of the sports body and the functioning of the main body systems (skeletal, energy, cardiovascular, respiratory, muscular, nervous, endocrine). The students will have the opportunity to apply theory into practice through specially designed practical sessions in the laboratory.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate an understanding of fundamental anatomy and physiology concepts.
- 2 Identify the structure and functions of the major physiological systems.
- 3 Utilise laboratory procedures to measure function of physiological systems.

## Learning Outcomes of Assessments

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

Written Exam	1	2
Practical Skills	3	

## Outline Syllabus

*Necessary Life Functions:*

- *Homeostasis*

*Cells (Structure and Function):*

- *Cell Growth- Mitosis*

*Skeletal System:*

- *Bone Structure and Development*
- *Functions of the Skeletal System*
- *Bone Remodelling and Repair*

*Muscular System:*

- *Muscle tissues- Types*
- *Muscle structure- Agonist and antagonistic pairs*
- *Muscular System Functions*

*Cardiovascular System:*

- *Heart*
- *Blood*
- *Blood Vessels*
- *Blood Pressure*

*Respiratory System:*

- *Structure*
- *Mechanics of breathing*
- *Gas Exchange*

*Energy Systems:*

- *Aerobic Energy System*
- *Lactic Acid Energy System*
- *ATP-PC Energy System*
- *Energy Continuum*

*Endocrine System:*

- *Hormones and Glands*

*Nervous System:*

- *Sympathetic and parasympathetic nervous systems*

*Effects of exercise:*

- *Acute and Chronic responses to exercise on each body system*

## **Learning Activities**

The students will be engaged in a blend of teaching and learning strategies. Theoretical delivery will occur through lectures, teamwork, workshops, practical and student lead discovery-based learning, supported via the VLE. The students will typically receive 15 hours of delivery both, practical and theory based through lectures, including guest lectures from the sports industry. Furthermore, the students will receive 18 hours of group discussion workshops linking the theory of coaching pedagogy to coaching practice. Finally, throughout the academic year, the students will receive 15 hours of workshops where staff will blend the formulation of theoretical and practical coaching to assist and support students to apply their knowledge.

## **Notes**

None.