Prifysgol Wrecsam
Wrexham University

Module specification

When printed this becomes an uncontrolled document. Please access the Module Directory for the most up to date version by clicking on the following link: Module directory

Module Code	SES406
Module Title	Foundations of Anatomy and Exercise Physiology
Level	4
Credit value	20
Faculty	FLSS
HECoS Code	100433
Cost Code	GASP
Pre-requisite module	N/A

Programmes in which module to be offered

Programme title	Core/Optional/Standalone
BSc (Hons) Sport & Exercise Science	Core

Breakdown of module hours

Learning and teaching hours	14 hrs
Placement tutor support hours	0 hrs
Supervised learning hours e.g. practical classes, workshops	22 hrs
Project supervision hours	0 hrs
Active learning and teaching hours total	**36 hrs**
Placement hours	0 hrs
Guided independent study hours	164 hrs
Module duration (Total hours)	**200 hrs**

Module aims

- Introduce the student to applied anatomy & physiology and enhance their knowledge and understanding of the complex systems within the human body.
- Investigate how the body responds to exercise and explore the methods used to monitor the development of the bodily systems within a sporting context.
- Introduce students to carrying out experiments in the physiology laboratory and how the data collected can be statistically analysed.
- Develop knowledge of research within the applied physiological field.

Module Learning Outcomes

At the end of this module, students will be able to:

1	Demonstrate an understanding of how the various bodily systems function at rest and in relation to exercise.
2	Review literature pertinent to a topic that will be studied as part of laboratory based practical work.
3	Produce a set of appropriate research aims and hypotheses.
4	Justify selected protocols and procedures used to collect physiological test data.
5	Statistically analyse data collected from laboratory based practical work to correct standards.
6	Discuss data collected in a laboratory-based experiment in relation to relevant research literature.

Assessment

Indicative Assessment Tasks:
This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Examination - Students will undertake a 2-hour MCQ on the anatomy and physiology of the various bodily systems under exam conditions.

Written Assignment - Students will produce a lab report on the physiological data they have collected during a practical seminar (2000 words).

Assessment number	Learning Outcomes to be met	Type of assessment	Duration/Word Count	Weighting (%)	Alternative assessment, if applicable
1	1	Examination	2 hours	40	N/A
2	2-6	Written Assignment	2000 words	60	N/A

Derogations

N/A

Learning and Teaching Strategies

A blend of lectures, practicals and workshops are the main learning and teaching strategies employed on this module. Students will be provided with short, pre-recorded content prior to each practical laboratory session which will outline the focus of the practical skills that will be developed in line with the university Active Learning Framework.

Welsh Elements

The programmes will be delivered through the medium of English. Students are entitled to submit assessments in the medium of Welsh. If students wish to converse in Welsh, they will be assigned a Welsh speaking personal tutor. Students will be sign posted to relevant opportunities via the VLE and MS Teams page.

Indicative Syllabus Outline

- Homeostasis- health screening and blood pressure
- Muscular skeletal system- body composition
- Cardiovascular system- HR and RPE, RMR and VO_2max
- Energy systems- Wingate testing
- Respiratory system- spirometry
- Nervous system
- Digestive system
- Endocrine system
- Immune system
- Statistics & SPSS

Indicative Bibliography

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads

McArdle, W. Katch, F. I. Katch, V. L. (2023). *Exercise Physiology: Nutrition, Energy and Human Performance*. 9th ed. Philadelphia. Wolters Kluwer Health/ Lippincott Williams & Wilkins.

Other indicative reading

Kenney, L. W. Wilmore, J. H. Costill, D. L. (2021). *Physiology of Sport and Exercise*. 8th ed. Champaign, IL. Human Kinetics.

Field, A. (2024). *Discovering Statistics Using IBM SPSS Statistics*. 6th ed. London. SAGE Publications Ltd.

Power, S.K. and Howley, E.T. (2023). *Exercise Physiology: Theory and Application to Fitness and Performance*. 12th ed. New York: McGraw-Hill.

Administrative Information

For office use only	
Initial approval date	18/07/2025
With effect from date	08/09/2025
Date and details of revision	
Version number	1.0