

Module Code:	FAW507
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Module Title:	Applied Exercise Physiology
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Level:	5	Credit Value:	20
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Cost Centre(s):	GASP	JACS3 code:	C600
		HECoS code:	100433

Faculty:	Social & Life Sciences	Module Leader:	Chelsea Moore
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Scheduled learning and teaching hours	35 hrs
Guided independent study	165 hrs
Placement	0 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered (not including exit awards)	Core	Option
BSc (Hons) Football Coaching and the Performance Specialist	✓	<input type="checkbox"/>
BSc (Hons) Sport, Health and Performance Science	✓	<input type="checkbox"/>
BSc (Hons) Sports Coaching and Performance Development	✓	<input type="checkbox"/>

Pre-requisites
None

Office use only					Version no: 3
Initial approval:	13/08/2018				
With effect from:	01/09/19				
Date and details of revision:	10.06.19 (minor changes to assessment narrative and syllabus outline only)				
					Version no: 4

Module Aims

This module aims to:

Explore techniques used to monitor physiological variables and be able to relate them in an applied setting.

Develop practical experience of applied physiological testing techniques and become fully aware of the safety issues relating to physiological monitoring and prescription of training.

Examine, quantify and analyse the body's acute response to sport and exercise and chronic adaptation to training, with reference to the various systems of the body (e.g. cardiovascular, respiratory, metabolic, musculoskeletal and energy systems).

Demonstrate how physiological knowledge can be used to enhance performance.

Intended Learning Outcomes

Key skills for employability

- KS1 Written, oral and media communication skills
- KS2 Leadership, team working and networking skills
- KS3 Opportunity, creativity and problem solving skills
- KS4 Information technology skills and digital literacy
- KS5 Information management skills
- KS6 Research skills
- KS7 Intercultural and sustainability skills
- KS8 Career management skills
- KS9 Learning to learn (managing personal and professional development, self-management)
- KS10 Numeracy

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

Key Skills

At the end of this module, students will be able to		Key Skills	
1	Demonstrate an ability to work competently and professionally in an applied sport and exercise environment.	KS1	KS2
		KS3	KS4
2	Analyse, calculate and evaluate physiological test data.	KS1	KS4
		KS5	KS10
3	Examine the impact of training principles on physiological adaptation.	KS1	KS4
		KS6	
4	Evaluate the impact of variables that impact on performance/training (e.g. nutrition/ergogenic aids, fatigue, sleep and muscle damage).	KS1	KS4
		KS6	

Transferable skills and other attributes

Working independently, academic writing skills, practical and laboratory skills, data analysis, and the use of IT.

Derogations

None

Assessment:

Indicative Assessment Tasks:

Assessment 1: Coursework

Document evidence/ practice-based competencies of a range of physiological tests. In small groups you will perform a range of physiological tests (e.g. VO_{2max} , lactate threshold). Test procedures, health and safety considerations and data collection will be written up individually, on worksheets provided, for formal submission and assessment.

Assessment 2: Report

Students will complete a laboratory report assessing students' ability to analyse and interpret physiological test data and write a written lab report on the results.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration (if exam)	Word count (or equivalent if appropriate)
1	1 & 2	Coursework	40	N/A	1600
2	3 & 4	Report	60	N/A	2400

Learning and Teaching Strategies:

A combination of lead-lectures, practical workshops and seminars will form the basis of this module. You will be required to undertake background reading and experiential work will be conducted across a range of sports. Formative assessments will be provided through practical tasks and feedback given based on performance in class-based tasks.

Syllabus outline:

The principles of training
 Neuromuscular Adaptations to strength training
 Data analysis and SPSS
 Muscular skeletal adaptations to strength training
 Body composition training
 Cardiovascular and respiratory adaptations to endurance training
 Lactate threshold testing
 Metabolic adaptations to endurance training
 Blood sampling
 Metabolic adaptations to anaerobic exercise
 Sprint field tests
 VO_2 max testing

Indicative Bibliography:

Essential reading

Kenney, W.L., Wilmore, J.H. and Costill, D.L. (2012). Physiology of Sport and Exercise. 5th ed. Champaign, Ill: Human Kinetics.

Pescatello, L.S. (ed.) (2014). ACSM's Guidelines for Exercise Testing and Prescription. 9th ed. Philadelphia PA: Lippincott Williams & Wilkins.

Other indicative reading

Eston, R. and Reilly, T. (Eds.) (2009), Kinanthropometry and Exercise Physiology Laboratory Manual: Tests, Procedures and Data. London: E.& F.N. Spon.

Heyward, V.H. (2014). Advanced Fitness Assessment & Exercise Prescription. 7th ed. Champaign, IL: Human Kinetics.

Jarvis K., (2015). Strength and Conditioning for Football. Bloomsbury Sport

Jeukendrup, A., and Gleeson, M. (2004). Sport Nutrition. Champaign, Ill: Human Kinetics.

McArdle, W. D. Katch, F. I. and Katch, V. L. (2007) Exercise Physiology: Energy, Nutrition & Human Performance. 6th ed. Philadelphia: Williams and Wilkins.

Maud, P.J. and Foster, C. (Eds). (2006). Physiological Assessment of Human Fitness. 2nd ed. Champaign, IL: Human Kinetics.

Sharkey, B.J. (2013). Fitness and Health. 7th ed. Champaign, IL: Human Kinetics.