PRIFYSGOL glyndŵr UNIVERSITY

MODULE SPECIFICATION FORM

Module Title: Sport and Exercise Physiology in an Applied Setting	Level: 6	Credit Value: 20

Module code: SPT610	Cost Centre: GASP	JACS2 code: C600

Trimester(s) in which to be offered: 1 and 2	With effect from: Sept 2014

Office use only: To be completed by AQSU:	Date approved: September 2011 Date revised: September 2014 (to include Sport Mgt programme) Version no: 2

Existing/New: New	Title of module being replaced (if any): None

Originating Academic area:	Sport & Exercise Sciences	Module Leader:	Dr Sue Taylor

Module duration (total hours):	200	Status: core/option/elective (identify programme where appropriate):	BSc (Hons) Sport and Exercise Sciences (Core) BSc (Hons) Sports Management (Option)
Scheduled learning & teaching hours	36		
Independent study hours	164		
Placement hours	0		

Programme(s) in which to be offered: BSc (Hons) Sport and Exercise Sciences BSc (Hons) Sports Management	Pre-requisites per programme (between levels): None

Module Aims:

This module aims to:

1. Provide opportunities to critically analyse the physiological consequences of exercise undertaken in challenging conditions;
2. Evaluate the different physiological responses and / or training adaptations among sub-populations;

3. Critically appraise various physiological tests in terms of their ecological validity in testing an athlete from a designated sport.
4. Build and extend the skills of interpreting physiology data acquired at levels 4 and 5 to apply and utilise in a 'real-life' applied setting.

Expected Learning Outcomes

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

Knowledge and Understanding

1. Critically appraise the acute and/or chronic effects of exercise undertaken in challenging conditions or in special populations (KS1)
2. Critically examine physiological profiles and develop appropriate guidelines for performance (KS5, KS8)
3. Critically evaluate physiological tests and apply them in a working environment (KS8)
4. Evaluate physiological data in an applied environment (KS10)

Key skills for employability

1. Written, oral and media communication skills
2. Leadership, team working and networking skills
3. Opportunity, creativity and problem solving skills
4. Information technology skills and digital literacy
5. Information management skills
6. Research skills
7. Intercultural and sustainability skills
8. Career management skills
9. Learning to learn (managing personal and professional development, self management)
10. Numeracy

Assessment:

please indicate the type(s) of assessment (e.g. examination, oral, coursework, project) and the weighting of each (%). ***Details of indicative assessment tasks must be included.***

Case Study: An individual assessment where students will be presented with a physiological profile of an athlete, they will then be required to critically discuss the guidelines they would provide to the athlete to ensure that their performance is not compromised in a prescribed challenging condition. Or alternatively students may be required to appraise the acute and/or chronic effects of exercise undertaken by special populations (e.g. children, female athletes, masters/veteran athletes). The learning outcomes will be met regardless of the topic chosen. The different topics will alternated across cohorts and not within them **(Learning Outcomes 1 and 2).**

Practical Assessment: Students will be assigned an athlete and working in small groups they are required to select and justify the most ecologically valid physiological tests to undertake with the athlete. They must then undertake the test, interpret the findings and then provide athlete feedback **(Learning Outcomes 3 and 4).**

Assessment	Learning Outcomes to be met	Type of assessment	Weighting	Duration (if exam)	Word count or equivalent if appropriate
1	1 and 2	Case Study	50%		2000 words
2	3 and 4	Practical	50%		40 mins (approx.)

Learning and Teaching Strategies:

This module will involve a series of lectures which are supported by practicals and where appropriate seminars.

Syllabus outline:

1. Environmental conditions and related acute, chronic and training responses to challenging conditions e.g. altitude, heat, pressure, gravity, travel, pollution and cold
2. Physiological and structural changes that occur with growth/maturation and ageing. Trainability of veteran and child athletes.
3. Gender-specific physiological and physical attributes of female athletes.
4. Dietary supplementations: health and performance enhancing and their influence on performance.
5. Needs analysis for elite sports performers
6. Providing feedback
7. Quantitative data analysis of physiological data

Bibliography

Essential reading:

Armstrong L.E. (2000). *Performing in Extreme Environments*. Champaign, IL: Human Kinetics.

Armstrong, N., and Sharp, N.C.C. (2007) *Paediatric Exercise Physiology*. Edinburgh: Churchill Livingstone.

Åstrand, P.-O., Rodahl, D., Dahl, H.A. and Strømme, S.B. (2003) *Textbook of Work Physiology.Physiological Basis of Exercise.* 4th Edition. Champaign, IL: Human Kinetics.

Gore, C. J. (2000) *Physiological Tests for Elite Athletes.* Champaign, IL: Human Kinetics.

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

Rowland, TW. (2005). *Children's Exercise Physiology*. Champaign, IL: Human Kinetics.

Shephard, R.J. and Åstrand, P.O. (1992). *Endurance in Sport*. Oxford: Blackwell Scientific.

Taylor, A.S. and Groeller, H. (2008). *Physiological bases of human performance during work and exercise.* Edinburgh: Churchill Livingstone.

Whyte, G. (2006). *The Physiology of Training*. Edinburgh: Churchill Livingstone.

This module will draw on journal articles taken from a range of publications such as (this list is not exhaustive):

Journal of Sport Sciences, Medicine and Science in Sports and Exercise, Sports Medicine, Journal of Applied Physiology etc.