MODULE SPECIFICATION

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Module Code:	SPT624

Module Title:	Environmental Physiology

Level:	6	**Credit Value:**	20

Cost Centre(s):	GASP	JACS3 **code**: HECoS code:	C600 100433

Faculty	FLSS	**Module Leader:**	Chelsea Moore

Scheduled learning and teaching hours	24 hrs
Placement tutor support	0hrs
Supervised learning eg practical classes, workshops	24 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total contact hours	**24** hrs
Placement / work based learning	
Guided independent study	176 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered (not including exit awards)	Core	Option
Bsc (Hons) Applied Sport and Exercise Sciences	☐	✓
Bsc (Hons) Football Coaching and the Performance Specialist	☐	✓

Pre-requisites
None

Office use only
Initial approval: 01/04/2020 Version no: 1
With effect from: 28/09/2020
Date and details of revision: Version no:

Module Aims
Introduce students to the physiological responses to exposure in extreme environments. To evaluate various adaptation strategies to preparing to exercise in extreme environments. To build and extend knowledge from level 5 in training prescription. To utilize skills in conducting physiological tests in an applied scenario.

Module Learning Outcomes - at the end of this module, students will be able to	
1	Critically evaluate the acute and/or chronic effects of exercise undertaken in challenging environments.
2	Critically evaluate the use of adaptation strategies used in preparation of undertaking exercise in challenging environments.
3	Conduct physiological tests with a client preparing to undertake exercise in a challenging environment.
4	Evaluate physiological data test data and apply it in a working environment.

Employability Skills **The Wrexham Glyndŵr Graduate**	**I = included in module content** **A = included in module assessment** **N/A = not applicable**
CORE ATTRIBUTES	
Engaged	I
Creative	I
Enterprising	I
Ethical	A
KEY ATTITUDES	
Commitment	I
Curiosity	A
Resilient	A
Confidence	A
Adaptability	A
PRACTICAL SKILLSETS	
Digital fluency	A
Organisation	I
Leadership and team working	A

Employability Skills The Wrexham Glyndŵr Graduate	I = included in module content A = included in module assessment N/A = not applicable
Critical thinking	I
Emotional intelligence	I
Communication	A

Derogations
None

Assessment:			
Indicative Assessment Tasks: 1: Students will complete a practical exam, undertaking a physiological test with a client based on case study information. They are then to provide a report outlining the key adaptation strategies of exercising in extreme environments			
Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1-4	Coursework	100%

Learning and Teaching Strategies:
Lectures, seminars, practical laboratory workshops.

Syllabus outline:
Altitude Thermoregulation Hydration and fluid loss Overtraining Biological rhythms Ultra endurance events Physiological testing Reliability and validity

Indicative Bibliography:

Essential reading

Gunga, H-A. *Human physiology in extreme environments*. (2014). Amsterdam: Academic Press.

Périard, J. D. (2018). *Heat Stress in Sport and Exercise: Thermophysiology of Health and Performance*. Switzerland: Springer, Cham.

Other indicative reading

Beltz, N. M. Gibson, A. L. Janot, J. M. Kravitz, L. Mermier, C. M. Dalleck, L. C. (2016). Graded Exercise Testing Protocols for the Determination of VO_2max: Historical Perspectives, Progress, and Future Considerations. *Journal of Sports Medicine*, doi:10.1155/2016/3968393.

Lee, A. Galvez, J. C. (2012). Jet Lag in Athletes. *Sports Health*, 4, (3), pp. 211-216.

Noakes, T. D. St Claire Gibson, A. Lambert, E. V. (2006). From catastrophe to complexity: a novel model of integrative central neural regulation of effort and fatigue during exercise in humans: summary and conclusions. *British Journal of Sports Medicine*, 39, pp. 120-124.

Reilly, T. Waterhouse, J. (2004). *Sport Exercise and Environmental Physiology*. 1ST ed. London: Churchill Livingston.

Winter, E. M. Jones, A. M. Davison, R. Bromley, P. D. Mercer, T. H. (2007). *Sport and Exercise Physiology Testing Guidelines: The British Association for Sport and Exercise Science Guide.* Volume 2: Exercise and Clinical Testing. Oxon: Routledge.

Wyatt, F. B. (2014). Physiological Responses to Altitude: A Brief Review. *Journal of Exercise Physiology*, 17, (4), pp. 90-96.