Liverpool John Moores University

Title: ENVIRONMENT AND PERFORMANCE

Status: Definitive

Code: **7018SPOSCI** (114320)

Version Start Date: 01-08-2011

Owning School/Faculty: Sports Sciences Teaching School/Faculty: Sports Sciences

Team	emplid	Leader
Tim Cable		Υ

Academic Credit Total

Level: FHEQ7 Value: 20.00 Delivered 24.00

Hours:

Total Private

Learning 200 Study: 176

Hours:

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	12.000
Practical	4.000
Seminar	2.000
Tutorial	6.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Laboratory report (1500 words)	100.0	

Aims

The purpose of this module is to develop and extend the students appreciation of the impact of environmental change (e.g., temperature, pressure, time schedules) on physiological control mechanisms. The consequences of such alteration for athletic performance will be discussed. The long term adaptation to new environments will be considered and current strate.g.ies used to enhance the process of acclimatisation will be examined.

Learning Outcomes

After completing the module the student should be able to:

- 1 Understand the impact of environmental challenge on performance.
- 2 Critically evaluate the physiological responses and mechanisms that operate in altered environments.
- 3 Apply conceptual knowledge in the design of acclimatisation strategies to negate the influence of environment on performance.
- 4 Systematically understand and apply established research techniques to measure the impact of environmental change.
- 5 Demonstrate knowledge of the relevant literature and integrative written and verbal communication skills.

Learning Outcomes of Assessments

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

Lab report 1 2 3 4 5

Outline Syllabus

- 1. Cardiovascular control during exercise.
- 2. Cardiovascular adjustments during exercise in the heat / acclimatisation.
- 3. Exercise at altitude and acclimatisation.
- 4. Jet lag, travel and performance.
- 5. Space Physiology.
- 6.Exercise in the cold.

Learning Activities

Students will benefit from attending lectures, tutorials, seminars and practicals to develop their critical understanding of environmetal physiology and it's impact on sports performance. In addition to prescribed reading, this will allow students to complete laboratory and oral assignment tasks.

References

Course Material	Book
Author	Rowell, L.B.
Publishing Year	1993
Title	Human cardiovascular Control
Subtitle	
Edition	
Publisher	Oxford University Press

ISBN	

Course Material	Book
Author	Saltin, B.J. (ed)
Publishing Year	2000
Title	Exercise and the circulation in health and disease.
Subtitle	
Edition	
Publisher	Human Kinetics.
ISBN	

Course Material	Book
Author	Armstrong, L.E.
Publishing Year	2000
Title	Performance in extreme environments
Subtitle	
Edition	
Publisher	Human Kinetics
ISBN	

Course Material	Book
Author	Reilly, T. & Waterhouse, J.
Publishing Year	2005
Title	Sport, Exercise and Environmental Physiology.
Subtitle	
Edition	
Publisher	Elsevier
ISBN	

Notes

The purpose of this module is to provide the student with an appreciation of the impact of environmental change (e.g. Temperature, pressure, time schedules) on physiological control mechanisms. The consequences of such alteration for athletic performance will be discussed, as will be the long term adaptation to new environments. Finally the current strategies used to enhance the process of acclimatisation and therefore reduce the impact on performance will be examined.