

Module Information

2022.01, Approved

Summary Information

Module Code	5105SPOSCI
Formal Module Title	Physiological Responses to Exercise Training
Owning School	Sport and Exercise Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Sport and Exercise Sciences

Learning Methods

Learning Method Type	Hours
Lecture	22
Practical	6
Seminar	2
Tutorial	4
Workshop	14

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

Aims and Outcomes

Aims	To develop knowledge and understanding of the cardiovascular and metabolic responses of acute and chronic exercise and discuss these in relation to human health and performance.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Explain the cardiovascular and metabolic responses to endurance, high intensity and resistance exercise training
MLO2	2	Explain the cardiovascular and metabolic responses to exercise training in different environmental conditions and disease states

Module Content

Outline Syllabus	Cardiovascular and metabolic training adaptations to endurance exercise Cardiovascular and metabolic training adaptations to resistance exercise Cardiovascular and metabolic training adaptations to high intensity intermittent exercise Temperature and cardiometabolic responses to exercise in the cold and heat Cardiovascular and metabolic consequences to ageing and physical inactivity Impact of exercise training on cardiovascular and metabolic risk factors and disease
Module Overview	This module develops your knowledge and understanding of the cardiovascular and metabolic responses of acute and chronic exercise. You will discuss these in relation to human health and performance.
Additional Information	The content will include both theoretical knowledge and practical skills related to a number of physiological systems. This will be evaluated by the completion of the relevant assessment tasks. This module will incorporate support strategies in an attempt to ensure student progression. This will include feed forward and feedback on assessment and personal tutorial support. This will be augmented with interactive resources that facilitate self-directed exploration of the human physiology in responses to exercise training. The Association for Nutrition (AfN) competencies covered in this module include: CC1a The human/animal body and its functions, especially digestion, absorption, excretion, respiration, fluid and electrolyte balance, cardiovascular, neuro-endocrine, musculoskeletal and haematological systems, immunity and thermoregulation, energy balance and physical activity. CC1b Mechanisms for the integration of metabolism, at molecular, cellular and whole body levels for either human or animal systems. CC1i Nutrition in health and disease, consequences of an unbalanced diet for either human or animal systems. CC1j Nature of common conditions that require dietary manipulation or can affect physical activity, such as obesity, diabetes, hypertension, cardiovascular disease, cancer etc. for either human or animal systems. CC1k How nutritional needs change with age, gender, physical activity, lifestyle etc. for either human or animal systems. CC1n Ability to obtain, record, collate, analyse, interpret and report nutrition-related data using appropriate qualitative and quantitative research and statistical methods in the field and/or laboratory and/or intervention studies, working individually or in a group, as is most appropriate for the discipline under study. CC1o Prepare, process, interpret and present data, using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programs for presenting data visually. CC4a Principles and methods of measurement and estimation of energy balance; energy expenditure physical activity and fitness; body mass; body composition; how body mass and energy balance are controlled for either human or animal systems.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Laboratory report	50	0	MLO1
Essay	Essay	50	0	MLO2

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Juliette Strauss	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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