School of Sport, Exercise & Rehabilitation Sciences

2019-20 Academic Year

Module Availability for

Incoming International Exchange Students

IMPORTANT INFORMATION: PLEASE READ CAREFULLY

Module availability refers to the period of time an exchange student is with us:

- "Semester 1" (September to December) only*
- "Semester 2" (January to June) only
- "Full Year" (September to June)

*(*some modules have alternative assessments for these students - which may mean a number of exams & coursework before Christmas, so please be aware that there may be assessment bunching at this time)*

Please read through the availability of modules carefully before choosing your options.

Some modules may require previous learning in an area at your home institution.

Important Notes:

- *Module title, content, assessment, delivery & staffing may be subject to change a part of ongoing Quality Assurance processes*
- *Timetables are not confirmed until the start of term and may be subject to change due to unforeseen circumstances.*
- *Exchange students may be limited within certain modules through a numbers capping process.*
- *Students who attend in Semester 1 (Autumn term - September to December) may need to undertake slightly different assessments before they leave for Christmas if a final exam is normally stipulated. This will mean additional assessment for those modules.*
- *Students attending in Semester 2 (Spring term - January to April + exam period in May) are expected to attend the summer exams in May/June).*
- *Those attending the Full Year are expected to be at University from September to June. Absences must be confirmed with the UoB Study Abroad Office.*
- *It is not possible to resit assessments in Year 3 modules.*
- *Resit assessments for Year 1 & 2 modules normally take place at the end of August.*
- *Whilst we attempt to keep this document as up to date as possible, please check the date on the footer & send any queries to Carol Barry-Southwick (C.Barry@bham.ac.uk) or Valerie Queeley (V.S.Queeley@bham.ac.uk) in School of Sport, Exercise and Rehabilitation Sciences.*

Year 1 Modules:

Semester 1 Modules

Module Title: **Functional Anatomy** **(Cannot be taken with Movement and Learning)**	Module Code: TBC
Semester: 1	Credits: 20
Module Leader: Dr Craig McAllister	Lecture Times: (TBC) Mon 13-14:00 Tues 10-12:00 (some weeks) & 15-16:00 Thurs 11-14:00 (some weeks) Fri 10-12:00 (some weeks) & 14-16:00
Module Description: This module provides a comprehensive course in functional anatomy including lectures on the central nervous system and musculoskeletal anatomy and basic biomechanical principles. Small-group practical sessions with the support of PG Physiotherapy students will apply the lecture knowledge within a range of sport and exercise situations. The regular provision of homework sheets in conjunction with online resources will be used to guide independent study. Two separate laboratory classes will allow students to develop practical skills and data analysis techniques. This module provides the backbone of knowledge for advanced study in modules related to human movement topics in subsequent years.	
Module Assessment: Laboratory Assessment (20%) Class Test (65%) Completion of in class worksheets in practical classes with compulsory attendance (15%)	

Semester 2 Modules

Module Title: **Human Physiology and Exercise**	Module Code: TBC
Semester: 2	Credits: 20
Module Leader: Dr George Balanos	Lecture Times: (TBC) • Mon 9-11 • Tues 9-10 • Fri 4-5
Module Description: An introductory course of lectures in human physiology covering the functions of the nervous, cardiovascular and respiratory systems, the kidney, fluid balance and thermoregulation. Aims: To provide a course of study in human physiology, and introduce students on the principles of physiological regulation as this applies in healthy resting conditions, exercise and disease. This module provides the backbone of knowledge for advanced study in exercise and health physiology	
Assessment: 20% Class Test 30% Laboratory assessment 50% Examination	

Module Title: **Sport, Exercise, and Health Psychology**	Module Code: TBC
Semester: 2	Credits: 20
Module Leader: Dr Sally Fenton	Lecture Times: (TBC) Tues 14-15:00 Wed 11-12:00 Fri 15-16:00
Module Description: This module will explore the individual and social environmental factors that underlie participation and performance in physical activity contexts. Specifically, it will cover: psychological skills which are fundamental in sport and exercise settings, including theories of anxiety, and its effects on performance regulation; key theories used to enhance performance and physical activity participation in sport and exercise settings; the role of physical activity and exercise engagement for improving psychological health and well-being; and factors which are central to promoting physical activity and exercise in different groups	
Module Assessment: Case Study (20%), Lab assessment (20%), Exam (60%)	

Module Title: **Movement and Learning** **(Cannot be taken with Functional Anatomy)**	Module Code: TBC
Semester: 2	Credits: 20
Module Leader: Dr Matt Bridge	Lecture Times: (TBC)
Module Description: In this module students will be introduced to movement and learning as it relates to sport coaching and physical education. The module will also provide students with a broad knowledge and understanding of human anatomy as it relates to movement. Alongside this, it will consider how movement is created and controlled through the main theories of motor control and learning. Students will be introduced the use of movement analysis in coaching and physical education and some of the tools and techniques to analyse movement will be introduced. Students will be required to translate the theoretical content into practical advice for coaches and PE teachers	
Module Assessment: Proposal (40%); Class Test (60%)	

Module Title: **Exercise Biochemistry**	Module Code: TBC
Semester: 2	Credits: 20
Module Leader: Dr Martin Whitham	Lecture Times: (TBC) • Mon 17:00-18:00 • Tues 10-11:00 • Fri 2-3
Module Description: This module will provide a comprehensive introduction to biochemistry principles in relation to physical activity, exercise and sport performance. Specifically, this module covers: the structure and function of important biomolecules including carbohydrates, fats, proteins and nucleic acids; the structure and function of organelles; the biochemical characteristics of muscle fibres; the structure and function of muscle fibres; membrane transport; proteins as enzymes, receptors, antibodies; major pathways of energy metabolism and how these are regulated; the mobilisation and utilisation of fuels for exercise and the hormonal responses to exercise; examples of important techniques in biochemistry	
Module Assessment: 20% Laboratory assessment, 20% Written assessment, 60% Examination	

Year 2 Modules:

Semester 1 Modules

Module Title**: Exercise Physiology**	Module Code: 23647
Semester: 1	Credits: 20
Module Leader: TBC	Lecture Times: (TBC) • Mon 14:00-16:00 • Thurs 9-10:00 • Fri 9-10:00 • Plus practicals
Module Description: This module builds on the knowledge and understanding provided by level 1 modules in Human Physiology and Biochemistry. The responses of the major physiological systems of the body to exercise and environment are studied. The integrative nature of the neural, muscular, metabolic, respiratory and cardiovascular responses is examined in some detail.	
Module Assessment: 40% Laboratory Class Report, 60% Unseen examination – 2 hours	

Module Title**: Sport and Physical Activity Policy**	Module Code: 31148
Semester: 1	Credits: 20
Module Leader: TBC	Lecture Times: (TBC) • Mon 12-14:00 • Fri 14-16:00
Module Description: This module aims to develop students' critical understanding and thinking of policy making process in relation to sport and physical activity. It will examine major policy responses to social and health-related issues, and will explore how these have been deployed in sport and physical activity contexts. The module will also examine the major models and phases of the policy process, how evidence is gathered for policy making, how policy is enacted in practice, how research has impact on policy making, and the methods used to monitor and evaluate policy effectiveness in sport and physical activity policies.	
Module Assessment: Group presentation (25%) 1,500 words written assignment (75%)	

Module Title: **Innovation & Professional Practice in Sport**	Module Code: 23862
Semester: 1	Credits: 20
Module Leader: Dr Mark Griffiths	Lecture Times: (TBC) • Tues 9-11:00 • Thurs 14-17:00
Module Description: The module adopts a model-based approach to sports instruction. Drawing from theories of learning, students will be encouraged to consider critically a range of instructional models (e.g. TGFU, Sport Education) and how these might be applied. A model based approach offers a framework within which to consider pedagogical approaches to sport, and students will be expected to identify, plan, adapt and apply teaching/coaching models to a variety of sporting contexts.	
Module Assessment: Essay (70%); MCQ (30%)	

Module Title: **Exercise Metabolism**	Module Code: 19172
Semester: 1	Credits: 20
Module Leader: Dr Andy Blannin	Lecture Times: (TBC) • Mon 16-18:00 • Thurs 10-12:00
Module Description: This module builds on the first year module *Biochemistry and Cell Physiology* and provides the basis for the biochemistry orientated modules in the third year: *Sports Nutrition* and *Mechanisms of Adaptations to Training*. In this module students will examine the mechanisms that activate fuel mobilisation, transport and oxidation and of pathways activated during exercise. The module will also focus on methods to study metabolism from whole body to the molecular level as well as analytical skills. Then with the basic knowledge of metabolic pathways and the available methods the final part of the autumn term will explore the metabolic interactions of different organs. The regulation and mechanisms for the response to exercise and adaptations to exercise training will be examined. The module will evaluate the exercise signals and molecular signalling routes by which strength training leads to muscle hypertrophy and endurance training to mitochondrial biogenesis. The module will also explore the health benefits of regular activity and the underlying mechanisms. The final part of the module will introduce reactive oxygen and nitrogen species, as well as components of the immune system and how they are affected by exercise. At the end of the module the students should be able to present an integrative overview of the mechanisms by which metabolism is regulated during exercise and the molecular adaptation in the muscle as well as whole body metabolism in response to chronic exercise.	
Module Assessment: (40%) Critical Evaluation; (60%) Exam	

Semester 2 Modules

Module Title: **Applications of Sport and Exercise Psychology**	Module Code: 27824
Semester: 2	Credits: 20
Module Leader: Dr Jennifer Cumming	Lecture Times: (TBC) • Mon 14-15:00 • Thurs 11-13:00 • Tues/Fri 9-10:00 TBC
Module Description: A sound understanding of psychological theories and the ability to critically evaluate relevant empirical evidence are important prerequisites for successful application of psychological knowledge in sport and exercise sciences. This module provides an overview of various sport psychology topics at an intermediate undergraduate level. The significant role of individual characteristics and social processes when designing interventions to enhance sport performance and participation is explained.	
Module Assessment: Proposal (40%); Class Test (60%)	

Module Title: **Sports Nutrition**	Module Code:
Semester: 2	Credits: 20
Module Leader: Dr Gareth Wallis	Lecture Times: (TBC) Tues 10-12:00 Thurs 13-15:00
Module Description: This module provides a biochemical and physiological explanation of nutrition requirements of different types of exercise and sports. Particular note is taken of the interaction between nutrition and exercise performance. You will be expected to draw on your knowledge of physiology and biochemistry, interpret scientific studies after critical reading and analysis and should be able to translate the theory into practical advises for athletes.	

Module Assessment: 30% Essay; 70% Exam	
Module Title**: Science Communication**	Module Code: 31146
Semester: 2	Credits: 20
Module Leader: Dr Vikki Burns	Lecture Times: (TBC) • Mon 12-14:00 • Fri 14-16:00
Module Description: This module will provide students with the opportunity to study the theories, academic- and research-based approaches and strategies that are used to communicate scientific information, and to apply this understanding to generating effective materials in different formats. Students will critically examine existing examples of effective and less effective practice, and use this insight to develop their own skills in writing and communicating about academic research. The module will be delivered by a combination of interactive lectures, smaller seminars, and online resources. Students will produce their coursework via collaboration with an active research team in the School. This will develop their awareness of the research environment as well as developing transferable skills.	
Module Assessment: One individual written piece aimed at a broadsheet newspaper, New Scientist, The Conversation, or equivalent (500 words) 50% One group multimedia presentation aimed at schoolchildren (3-10mins depending on format) 50%	

Module Title: **Control of Human Movement**	Module Code: 28749
Semester: 2	Credits: 20
Module Leader: Dr Raymond Reynolds	Lecture Times: (TBC) • Mon 15-17:00 • Thurs 9-11:00
Module Description: This module acts as a bridge between the introductory anatomy, physiological and psychological modules in Level C and the more complex material in Level H modules and research projects. The course will cover basic brain structure and function - including neural pathways - that control voluntary movement, the control of posture, locomotion and sensation. The course will also introduce aspects of the psychology of sensation-action coupling and motor control.	
Module Assessment: 30% Laboratory Class Report, 70% Unseen examination – 2 hours	

Module Title: **Sports Development**	Module Code: 23864
Semester: 2	Credits: 20
Module Leader: TBC	Lecture Times: (TBC) • Tues 10-12:00 • Thurs 14-16:00
Module Description: The module focuses upon the sport development industry and the provision of opportunities, processes, systems and structures that enable and encourage people to take part in sport for recreation or to improve their performance, or to achieve wider social outcomes. It will develop students' knowledge and understanding of youth sport development, community sports development (social inclusion and health), mass participation and elite sport development and sporting events. By the end of the module students should occupy a sound understanding of both the national and international processes at work within sport development, as well as develop a critical knowledge of the various issues involved in both the development-of-sport, and sport-for- development.	

Module Assessment: Essay 40%; Exam 60%

Year 3 Modules:

Within each Group of modules below modules are normally timetabled at the same time, so you will only be able to choose <u>ONE</u> from any Group.

Term 1 September - December		Term 2 January - June	
Group A	**Group B**	**Group C**	**Group D**
Molecular Adaptation to Training	Cardiovascular and Respiratory Control in Exercise	Environmental Physiology	Mechanisms of Exercise and Diet
Motor Control in Sport	Sport Psychophysiology	Motor Learning and Neuroplasticity	Perception and Action
Character Development*		Exercise as Medicine*	
Sociology of Sport, Participation and Performance		Motivation in Sport & Exercise Settings	Contemporary Issues in Physical Education

* These modules can be chosen as part of ether group they span.

Group A (semester 1):

Module Title: **Molecular Adaptation to Training**	Module Code: 26419
Semester: 1	Credits: 20
Module Leader: Dr Leigh Breen	Lecture Times: (TBC) Mon 11-13:00 Fri 11-13:00
Module Description: Regular exercise and training leads to increases alterations in daily energy requirements and fuel oxidation. Much of this adaption at the whole body level is due to molecular alteration in the skeletal muscle which influences important muscle qualities such as strength and endurance. This module will examine current approaches used to study training adaptation, from whole-body systemic markers, through to gene and protein modification in skeletal muscle. Special attention will be given to the mechanisms that lead to these adaptations, specificity in adaptation resulting from endurance and resistance training, and examine the interaction between exercise and diet to improve skeletal muscle performance during health and disease.	
Module Assessment: 30% Coursework; 70% Exam	

Module Title: **Motor Control in Sport**	Module Code: 28726
Semester: 1	Credits: 20
Module Leader: Dr Francois-Xavier Li	Lecture Times: (TBC) • Mon 11-13:00 • Thurs 11-13:00
Module Description: The way complex movements such as sport skills are coordinated has been the object of research for nearly a century. The large theoretical background is well established. However, its applications to sport movements remain a challenge. Two main issues are addressed. Firstly, the integration of different theories and difference sub-disciplines, e.g. motor control and biomechanics is necessary for a holistic approach to complex movements. Secondly scientific evidence-based recommendations are not always available. The challenge is therefore to be able to draw the lines between different levels of knowledge. Sport skills are used as examples to support the analyses of applications of Motor Control in sporting context.	
Module Assessment: 30% Coursework; 70% Exam	

Module Title: **Character Development in Sport & Exercise**	Module Code: 26831
Semester: 1	Credits: 20
Module Leader: Dr Ian Boardley	Lecture Times: (TBC) • Mon 11-13:00 • Thurs 14:00-16:00
Module Description: This module builds on some of the psychology elements from the Year 2 SPECS Sport Science in Movement and Year 1 SES Foundations of Sport & Exercise Psychology modules. More specifically, it focuses on the elements of these modules relevant to morality and ethics in sport and exercise. The primary aim is to explore how sport and exercise can be used most effectively to develop desirable behaviours such as fair play and prosocial behaviour in participants. In addition, the module will also consider the effects of sport and exercise participation on character traits that extend beyond sport and exercise participation.	
Module Assessment: 30% Poster; 70% Exam	

Module Title: **Sociology of Sport: Participation & Performance**	Module Code: 26424
Semester: 1	Credits: 20
Module Leader: Dr Martin Toms	Lecture Times: (TBC) Mon 11-13:00 Thurs 14-16:00
Module Description: This module will build upon the foundations of sociology explored in the year 1 module. It then explores a number of these concepts (for example interactionist and figurational theories and the work of theorists like Bourdieu, Elias and Foucault) as they apply to the spectrum of participation in sport (with a focus upon coaching). Students will be involved in the sociological analysis of issues such as (for example) talent identification; participant development; the coach athlete dyad; and the influence of the family on participation from the perspectives of key stakeholders, using the theoretical frameworks (e.g. social capital) to explore the meaning of participation at these levels. Theoretical analysis will be used to further develop depth and breadth of understanding of these issues and implications for teachers and coaches. Other areas that will be explored include (for example) power, social positioning and socialisation. All of these will be explored along the spectrum of participation to performance levels, with emphasis on the engagement of the students on theorising and reflecting upon their own developmental experiences.	
Module Assessment: 40% Essay; 60% Exam	

Group B (semester 1)**:**

Module Title: **Human Cardiovascular & Respiratory Control in Exercise**	Module Code: 23649
Semester: 1	Credits: 20
Module Leader: Dr Mike Parkes	Lecture Times: (TBC) • Mon 13-14:00 • Tues 12-14:00 • Thurs 14-16:00 • Fri 13-14:00
Module Description: Understanding how the cardiovascular and respiratory systems control blood pressure, blood flow and the delivery of O_2 and substrates and removal of CO_2 and metabolites between rest and maximum exercise is crucial for understanding how humans exercise. This module studies to the limits of current knowledge, our understanding of how central feed forward and peripheral feedback pathways appear to be intimately involved in the control processes. The module uses lectures to introduce the basic concepts and scientific evidence, followed by seminars where staff and students debate the strengths and weaknesses of the key arguments so that students obtain a detailed understanding of the limits of current knowledge. Students are also given a thorough grounding in critically evaluating reviews scientific papers, the principles of scientific method and the skills of essay writing.	
Module Assessment: Written assignment (30%); Exam (70%)	

Module Title: **Sport Psychophysiology**	Module Code: 22473
Semester: 1	Credits: 20
Module Leader: Professor Chris Ring	Lecture Times: (TBC) • Mon 13-14:00 • Thurs 14-16:00 • Fri 13-15:00
Module Description: This module examines key topics in the psychology of sport (e.g., anxiety and performance, competition, emotion, aggression) and exercise (e.g., cognitive function, pain, mood) from a psychophysiological perspective.	
Module Assessment: 30% Essay; 70% Exam	

Group C (semester 2)**:**

Module Title: **Environmental Physiology**	Module Code: 23942
Semester: 2	Credits: 20
Module Leader: Dr George Balanos	Lecture Times: (TBC) • Mon 11-13:00 • Thurs 14-16:00 • Fri 12-14:00
Module Description: The physiological adaptations that take place due to exposure to challenging environmental conditions are fascinating and provide clear insight into normal physiology and homeostatic mechanisms. The module will cover three main areas: altitude, pressure (diving), cold/hot environments. In each section of the module the basic physiological adaptations will be described before exploring challenges that are imposed on the human body during exercise in these conditions. Each section will have seminars and a practical component.	
Module Assessment: 30% Coursework; 70% Exam	

Motor Learning and Neuroplasticity	Module Code: 28730
Semester: 2	Credits: 20
Module Leader: Dr Ned Jenkinson	Lecture Times: (TBC) • Mon 11-13:00 • Thurs 14-16:00 • Fri 11-14:00 (some weeks)
Module Description: Skill acquisition and motor learning encompasses an area of study that explains how we acquire, develop and retain new movement skills. The first part of the module, will explore the key concepts and theoretical frameworks for understanding how performers progress from novices with low levels of proficiency to experts who have mastered their skills. In the second part of the module students will learn how to assess motor skill proficiency and design training programs that optimise the quality and speed of skill acquisition.	
Module Assessment: 30% Assignment Research Proposal; 70% Exam	

Module Title: **Motivation in Sport & Exercise Settings**	Module Code: 23610
Semester: 2	Credits: 20
Module Leader: Professor Joan Duda	Lecture Times: (TBC) • Mon 11-13:00 • Tues 14-16:00
Module Description: The overall purpose of this module is to foster an in-depth understanding of the motivation-related determinants of participation, performance, and persistence in sport and exercise activities. In this module, the major theoretical frameworks and empirical findings relating to the study of motivation in the physical domain will be examined. The implications of this body of literature for sound interventions focused on the enhancement of physical activity will also be addressed.	
Module Assessment: Research Proposal (30%); Exam (70%)	

Group D (semester 2)**:**

Module Title: **Exercise and Diet**	Module Code: 28729
Semester: 2	Credits: 20
Module Leader: Dr Sarah Aldred	Lecture Times: (TBC) • Tues 12-14:00 • Fri 09:00-11:00
Module Description: This module will examine the mechanisms of action of different modes and intensities of exercise, and different diet strategies in improving exercise performance and adaptation to exercise, increasing expression of proteins associated with longevity, and reducing oxidative stress and inflammation in chronic disease.	
Module Assessment: Study design (10%); In-class timed Essay (seen questions) (30%); Exam (60%).	

Module Title: **Perception and Action**	Module Code: 29821
Semester: 2	Credits: 20
Module Leader: Dr David Punt	Lecture Times: (TBC) • Tues 12-14:00 • Thurs 16-18:00
Module Description: Human performance is affected by both the ability to process and interpret sensory information (perception) as well as the ability to plan and execute complex movements (action). While related study often highlights the relative contributions of perception and action, it is often the inter-dependence of these that is most relevant to subsequent behaviour. While the study of perception and action is often associated primarily with experimental psychology and neuroscience with an emphasis on theory, this module will focus on the application of theory to real world situations, focusing particularly on those situations relevant to performance and rehabilitation. The module will take the study of attention as a starting point, it will then address the representation of actions focusing initially on the study of motor imagery. Again, the emphasis will be on performance, identifying not only how this can be improved. Finally, the module will consider the control of complex actions such as reaching to grasp objects, bimanual coordination as well as balance. The module will consider how enhancing and disrupting perception modifies behaviour and how intervention for those individuals with related difficulties can be driven by knowledge of underlying theories and evidence.	
Module Assessment: Lab Report (30%); Exam (70%)	

Module Title: **Exercise as Medicine**	Module Code: 27534
Semester: 2	Credits: 20
Module Leader: Dr Jet Veldhuijzen van Zanten	Lecture Times: (TBC) Mon 13-15:00 Tues 12-14:00 Fri 13-15:00
Module Description: By the end of this module, students should be able to: discuss and design exercise regimes for (clinical) populations; discuss and design exercise promotions for (clinical) populations; discuss the physiological and psychological benefits of exercise; discuss the associations between physiological and psychological benefits of exercise.	
Module Assessment: Public health campaign poster with a scientific justification for the campaign (30%); essay and problem based exam (70%)	

Module Title: **Contemporary Issues in Physical Education**	Module Code: 28400
Semester: 2	Credits: 20
Module Leader: Dr Frank Herold	Lecture Times: (TBC) • Mon 13-16:00 • Fri 11-13:00
Module Description: This module draws together the knowledge and skills gained in the preceding sport pedagogy, coaching and teaching modules. Students will explore contemporary issues in Physical Education based on critical analysis of the literature in the field as well as analysis of cases and case studies from PE practice. As part of the module students will discuss and evaluate key research in physical education also experience and evaluate exemplar and innovative approaches to teaching PE.	
Module Assessment: Case Study (40%); Exam (60%)	

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