



**GRADUATE CERTIFICATE / GRADUATE DIPLOMA /  
MSC ADVANCED PHYSIOTHERAPY STUDIES**

**UCD School of Public Health Physiotherapy and Population Science  
University College Dublin  
Health Sciences Centre  
Belfield  
Dublin 4**

## **PHILOSOPHY OF THE COURSE**

The educational processes within the Graduate Certificate / Diploma / MSc Advanced Physiotherapy Studies will be underpinned by adult learning principles.

1. Where possible, a student-centered approach to education will be adopted.
2. Assessment will be based on the stated objectives.

## **AIMS OF THE COURSE**

The course aims to:

1. Broaden the students' knowledge base in the areas relevant to the practice of Physiotherapy mapping to their educational and career pathway needs.
2. Offer a flexible graduate educational pathway where students can register to a single module or as part of a structured degree programme on a part-time or full-time basis
3. Further develop interpersonal and communication skills.
4. Stimulate scholarly research in the area of Physiotherapy.

## **OBJECTIVES OF THE COURSE**

At the completion of this course the students should::

1. Have an extensive knowledge of Physiotherapy and related topics taken from the broad range of modules available from within the School i.e. Sports Physiotherapy, Sports and Exercise Medicine, Public Health
2. Where relevant (e.g. Sports Physiotherapy modules) demonstrate a high level of clinical reasoning by critically analysing information obtained in the examination to make appropriate decisions in selecting and modifying treatment procedures.
3. Be competent in discussing research methodology and critically evaluating relevant literature, and drawing clinical inferences as appropriate.

## **COURSE DIRECTOR**

**Dr Brona Fullen;** Room A3.10; Tel: 7166516, Email: brona.fullen@ucd.ie

## **COURSE ADMINISTRATOR;**

**Ms. Nuria Corcoran:** Room A3.02; Tel: 7166505      Nuria.corcoran@ucd.ie

Contact Nuria with any administration queries i.e. registration, fees.

## **MSc Advanced Physiotherapy Studies**

UCD's new flexible format allows you to design your own programme of study to suit your particular educational and career development needs. The educational pathway you choose can be flexible in terms of the modules you take.

The programme allows a choice of modules in strands of exercise and health, musculoskeletal physiotherapy, Primary care and health. Suggested modules could include (but the choice is yours):

Modules can be taken as part of structured PG qualification on a part-time or full-time basis. A typical 5 credit module corresponds approximately to 24 taught hours. No postgraduate clinical experience need except in limited modules\*

Graduate Certificate (30 credits), Graduate Diploma (60 credits), MSc (90 credits), Continuing Professional Development

### **Entry Requirements:**

This is open to Chartered Physiotherapists eligible for registration with the Irish Society of Chartered Physiotherapists (ISCP), with a 2:1 degree classification.

No postgraduate physiotherapy experience is required (except on select modules\*)

If English is not your native language, unless you have done your primary degree through English in an English speaking country, an English language qualification is required for all programmes. <http://www.ucd.ie/t4cms/English%20Language%20Requirements.pdf>

## Module Choices

### **Sports & Exercise Management**

- SMGT 40370 Sports Governance and Law (10 credits) 2
- SMGT 30210 Skills acquisition (5 credits) 2
- SMGT 40380 Sport Leadership and People Management (10 credits) 1
- SMGT 40400 Strategy and Operational Management in Sport (10 credits) 1

### **Public Health and Primary Care**

- PHPS 40860 Healthcare, Economics and Management 5.00
- PHPS 40370 Non-communicable disease epidemiology (5 credits) 1
- PHPS 40040 Public Health Practice (5 credits) 1
- PHPS 40230 One Health (5 credits) 1
- PHPS 40300 Health Promotion (5 credits) 2
- PHPS 20010 Public Health, Psychology and Sociology (5 credits) 2
- PHPS 40710 Promoting Consumer Nutrition (5 credits)
- PHPS 40980 Introduction to knowledge synthesis, Systematic Reviews, Meta- (5 credits) 1
- PHPS40650 International Health in Action (5 credits) 2

### **Research**

- PHTY 40270 Research Methods for Healthcare Practitioners (5 credits) 2
- PHTY40120 Dissertation (30 credits) 3

### **Sports and Exercise**

- PHTY 10010 Fundamentals of strength and conditioning (5 credits) 2
- PERS 20200 Exercise and public health (5 credits) 1
- PERS 20180 Psychology of sport and health II (5 credits) 2
- PERS 20010 Advanced strength and conditioning (5 credits) 1
- PERS 20130 Psychology of sport and health I (5 credits) 1
- PERS 20230 Neuromuscular and biomechanical lab testing (5 credits) 2
- PERS 20190 Testing and Evaluation of Human Performance (5 credits) 2
- PERS 20170 Optimisation of human performance (5 credits) 1
- PERS 30260 Sports injury management (5 credits) 1
- PERS 30010 Applied Nutrition Health Exercise and Sports Performance (5 credits) 2
- PERS 40040 The Science of Coaching: Theory (10 credits) 1
- PERS 40020 Planning in Strength and Conditioning 10 (credits) 2
- PERS 40010 Exercise Physiology and Sports Nutrition (10 credits) 1
- PERS 40070 Applied Sports Psychology and Skills Acquisition (10 credits) 1
- PERS 40070 Applied Sports Psychology and Skill Acquisition (10 credits) 1
- PHTY 20260 Mindfulness for Health (5 credits) 1 or 2
- PHTY 20240 Tai Chi for Sport & Health (5 credits) 2
- PHTY 41040 Health in a Global Society (5 credits) 2
- PHTY 41030 Spinal Studies 15 credits (1&2)
- MDCS42320 Emergencies in Sport and Exercise Medicine (15 credits) 1

1: semester 1, 2: semester 2

**Graduate Certificate / Graduate Diploma / MSc Advanced Physiotherapy Studies**

<b>Course</b>	<b>Credits Required</b>	<b>Mode</b>	<b>Division of Modules</b>
<b>Graduate Certificate</b>	30 credits	Part-time (2 years)	<u>Year 1</u> 15 credits (over 1 or 2 semesters)
			<u>Year 2</u> 15 credits (over 1 or 2 semesters)
	30 credits	Full-time (1 year)	Semester 1 - 15 credits  Semester 2 - 15 credits
<b>Graduate Diploma</b>	60 credits	Part-time (2 years)	<u>Year 1</u> 30 credits (15 credits per semester)
			<u>Year 2</u> 30 credits (15 credits per semester)
	60 credits	Full-time (1 year)	Semester 1 - 30 credits  Semester 2 - 30 credits
<b>MSc</b>	As for Graduate Diploma + Dissertation (30 credits) Semester 3 (summer)		

**Graduate Certificate:** 20 of the 30 credits must be level 4 modules (i.e. have 4 after the module code PHTY40340)

**Graduate Diploma:** 45 of the 60 credits must be level 4 modules

**MSc:** 70 of the 90 credits must be level 4 modules

## Module Descriptors

### Sports & Exercise Management

#### **SMGT40370 Sports Governance and Law (10 credits) 2**

This module will explore the importance of governance in sport. It will introduce various theoretical perspectives relating to governance theory and consider the relevance of these to the sport environment. An examination of governance practices across systemic, political and organisational domains will form a core component of the module. In particular, students will consider whether the governance structures within sport organisations are appropriate to enable it to carry out its key management and regulatory functions. This module will also illustrate the relationship between sport and the law, acquainting students with the main principles underpinning sports' law and its practice. It will also highlight the relevance of the law to the administration and management of sport in Ireland and internationally therefore providing students with an understanding of the legal context of organisational decision making in sport.

#### **SMGT 40380 Sport Leadership and People Management (10 credits)1**

This module explores how to effectively lead, manage, and develop people within an organisational setting. It utilises key concepts and theories from organisational behaviour (OB) and human resource management (HRM). The aim of this module is to develop students' knowledge of the links between OB, HRM practices and performance at the individual, team and corporate level of sports organisations. Students will address a wide range of issues from both a theoretical and practical perspective for example, leadership, organisational culture and change, negotiation, decision making, strategic recruitment and selection and performance management. After undertaking this module, students should have developed their understanding and acquired the tools necessary to critically analyse how competitive advantage can be delivered for sport organisations through the effective leadership and management of people.

#### **SMGT 40400 Strategy and Operational Management in Sport (10 credits) 1**

The module introduces students to the challenge of developing strategy and managing operational issues in sporting organisations. This module focuses on how a sport organisation can build a sustainable competitive advantage through its internal resources and capabilities to avail of key factors within its external environment. Students will be introduced to the underlying theories and practices along with the current trends in operations management and strategic planning. The aim of this module is to provide students with knowledge, skills and analysis tools in strategy and operations management which can be applied with the sport industry. Sport related case studies will be utilised to give students industry focused practical examples.

#### **SMGT 30210 Skills Acquisition (5 credits)**

The purpose of this module is to understand the principles underlying skill acquisition. Specifically, students will learn the stages of motor learning, the cognitive processes supporting skill acquisition, how motor skills are acquired, how learning can be enhanced and why skills attempts might fail. Each class will comprise of theoretical and practical components designed to encourage student interaction, curiosity and discussion. Formal lecture time and workshop sessions will be used to foster understanding of the area with a focus on the application of motor learning theories in the "real world". A practical learning laboratory will be used as a vehicle to evaluate and discuss hypotheses presented in the

literature. Most often examples from sport will be used to clarify these, however it is important to keep in mind that the principles and concepts introduced in class apply to any situation in which movement is the primary means of achieving a particular goal (e.g. leisure activities, activities of daily living, rehabilitation, & sport).

## Public Health

### **PHPS40980 – Introduction to Knowledge Synthesis, Systematic Reviews & Meta-analysis**

This module provides an introduction to different methodologies used in Knowledge Synthesis (narrative reviews, systematic reviews, meta-analysis, concept synthesis, rapid studies).

The course will have a specific emphasis on Systematic Reviews and Meta-analysis and the methods endorsed by the Cochrane Collaboration. Students will learn:

- To identify different types of systematic reviews
- to define a question using either PICO or any similar framework according to their field;
- to build a search strategy;
- to appraise the quality of individual studies;
- To identify study designs, outcomes and effective measures

This course will have an introduction to meta-analysis:

- an introduction to the use of software to conduct systematic reviews;
- to understand the statistical basis of MA;
- to understand the basis of assessing the confidence on the pooled estimates using the GRADE approach

The module is intended to guide students with their literature reviews or SR and to understand how systematic reviews can assist in decision-making for research or "real world" in their fields.

### **PHPS 40710 Promoting Consumer Nutrition**

This module will give you a basic understanding of the theory and practice that is essential to the effective communication of health messages. The module will initially consider the concept of health and health behaviour to provide a framework for effective communication strategies. Key components of planning, designing, and evaluating nutrition communication strategies will be explored. Contextual approaches will be examined in addition to designing and employing media channels and resources that are appropriate for the target population.

### **PHPS 40040 Public Health Practice (5 credits)**

In this module students are introduced to the principles and breadth of public health in practice and the factors outside the health sphere that impact on public health. The module provides baseline material for the rest of the MPH course in terms of awareness of the roles and responsibilities of public health practitioners.

The structures pertaining to public health practice in Ireland are outlined in the context of the overall organisation of Irish health services. Students are introduced to the role and sources of health information and are provided with practical examples of use for public health. The procedures for health impact assessment and needs assessment are described. The principles of advocacy for public health are introduced with examples of advocacy in practice. The public health responses to smoking, alcohol, drugs and injury are covered.



### **PHPS 40370 Non-communicable disease epidemiology (5 credits) 1**

In this module the epidemiology of certain important non-communicable diseases is examined (cardiovascular and respiratory diseases, obesity, diabetes mellitus and major cancers). The levels of prevention are introduced and strategies for primary, secondary and tertiary prevention are explored. The criteria for introduction of population screening and its role and delivery for secondary prevention of cancer and other chronic conditions is examined. Practical examples of introduction of screening programmes in practice are given. Recent advances in health care delivery and the planning of health services for these chronic conditions are discussed. Skills in literature searching and critical appraisal are developed.

### **PHPS 40230 One Health (5 credits)**

The overall aim is to ensure that the student develops an understanding of the epidemiology of key zoonotic agents and the relationship between animal and human health and food borne disease. In addition the student should gain an understanding of the use of animals as sentinels of environmental hazards.

### **PHPS40300 Health Promotion (5 credits)**

Health Promotion may be defined as the process by which individuals are enabled to take control of their health. This series charts the development of health promotion over the last two decades, including landmark influences such as the Ottawa Charter (WHO 1986). Theoretical and methodological issues are explored, with up to date information on good practice in the field. The lecture series covers: Basic concepts and principles; Settings Approaches, including School, Workplace, Community, Primary Care; Health and Public Policy; Ethics and Evaluation. On completion of the modules, students should be able to: Understand the core concepts of health promotion. Understand the different requirements in contrasting settings. Leave a practical understanding of action research

### **PHPS20010 Public Health, Psychology and Sociology**

The overall aims of this inter-disciplinary module are: (1) to understand population health; (2) to examine the epidemiology of health and disease; (3) to outline the public health, environmental, legislative, economic, societal and sociological factors that influence health; and (4) to examine psychological aspects of health and well-being. The student is introduced to specialty of Public Health/Epidemiology and to the social and behavioural sciences of Psychology and Sociology which are central to these concepts. During the module students are assigned to small groups of four or five. Each group is assigned a Public Health topic to research and each group presents the results of their research to their peers.

NOTE: For Students who wish to take this module electively:  
PLEASE CONTACT THE MODULE CO-ORDINATOR BEFORE YOU SIGN UP  
ELECTIVELY FOR THIS MODULE.

### **PHPS40860 HEALTH ECONOMICS AND MANAGEMENT**

This module combines the Principles of Health Economics, Economic Evaluation of Health Care Programs and Principles of Management

(1) The Health Economics component is specifically tailored to non-economists. It provides:

- an introduction to the main concepts in economics (opportunity cost, equity, efficiency, scarcity);
- an overview of economic principles with particular application to health care;
- an introduction to the existent systems that finance health care, and how the market forces operate in each of them
- a strong emphasis on application of concepts to health-related and policy questions;
- an understanding of the demand for health and healthcare, resource allocation, supply and demand, healthcare as a commodity;
- economic evaluations of Health Care programs and Impact Budget analysis
- decision-making in uncertainty, economic and health behaviour, welfare and economics evaluation.

#### (2(1) Principles of Management

- Introduction to management, strategies to improve efficiency, leadership, organizational culture, managing change in health care
- Performance indicators

## Research

### PHTY 40270 Research Methods for Healthcare Practitioners (5 credits)

This module will teach students the theoretical background that underpins informed research methods, research practice and statistical analysis; provide students with the theoretical and technical expertise to produce high quality research theses; advance individual practice of research methods and statistical analysis and facilitate students in undertaking and contributing to research projects.

### PHTY40120 Dissertation

This module aims to increase the student's knowledge base and foster inquiry and critical analysis in sports physiotherapy, orthopaedic manipulative therapy practice and its related sciences. The student will identify and pose a research question, critically analyse the literature, and successfully complete a research project. The student will also further develop their skills in written and oral presentation of their research findings.

## Sport and Exercise

### PERS 10010 Fundamentals of strength and conditioning (5 credits)Ω

This module will provide students with an introduction to strength and conditioning and its application to athletic populations. This module will present students with the most up to date physiological and biomechanical data regarding the central tenets of strength and conditioning applications and delivery. This module will be delivered through the combination of lectures and through extensive laboratory practical skill based sessions. Each topic will be presented as a separate work package. Each work package will be allocated different specific goals. These goals will be achieved through self-directed learning and through attendance at the laboratory practical skill based sessions. All material required for self-directed learning will be posted on Blackboard. The self-directed learning material will mainly

take the form of specific journal articles which students will be required to read and critically analyse to achieve each of the goals specified for each work package. This module acts as the pre-requisite to the Module Advanced Strength and Conditioning.

### **PERS 20010 Advanced strength and conditioning (5 credits) Ω**

The aims of this module are to: 1. Provide students with the underpinning scientific knowledge required to deliver effective strength and conditioning programs in a variety of settings. 2. Provide students with a working knowledge of scientifically based practical methods of fitness enhancement and evaluation. 3. Provide students with the theory and practical implementation of periodisation and preparation for competition. The module is designed to prepare students for accreditation by the UK Strength and Conditioning Association (UKSCA), an increasingly important pre-requisite for employment in the strength and conditioning industry. The module content covers the scientific principles of training and needs analysis, theory and practice of training all major elements of fitness for sport (strength, speed, power, endurance, flexibility), composing the training programme (including periodisation and preparation for competition), nutrition and ergonomic aids, measuring and evaluating fitness in the laboratory and field, and strength and conditioning for special populations. The theory lectures will be based on research findings, and will be supplemented by hands-on practical sessions.

Ω Upon completion of these two modules the students should be in a position to sit the National Strength and Conditioning Association or UK Strength and Conditioning Association Accreditation exams

### **PERS 20130 Psychology of sport and health I (5 credits)**

This module provides the student with an introduction to the role of Psychology in the promotion of health and improved performance in sport and exercise. It deals with sport-related topics such as confidence, motivation, anxiety, and concentration, as well as exercise and health-related topics, including the benefits of exercise, factors influencing exercise participation, and issues surrounding injury rehabilitation.

### **PERS 20180 Psychology of sport and health II (5 credits)**

This module builds on the knowledge gained in Psychology of Sport and Health 1, and serves to introduce the student to the role of psychology in optimizing performance in sport and exercise. It deals with issues such as motivation and imagery and competing under pressure at elite levels in sport.

### **PERS 20170 Optimisation of human performance (5 credits)**

This module will provide in depth knowledge of the scientific factors underpinning human performance. In particular, the latest research findings for applied topics that are known either to improve or impair exercise performance will be covered spanning from adolescents to the elite athlete. Particular emphasis will be given to critical analysis and understanding of evidence-based aerobic and anaerobic performance enhancement strategies employed by various sporting disciplines. The module content will be delivered in lecture format. Each topic will be presented as a separate work package. Each work package will be allocated

different specific goals. These goals will be achieved through self-directed learning. All material required for self-directed learning will be posted on Blackboard. The self-directed learning material will mainly take the form of specific journal articles which students will be required to read to achieve each of the goals specified for each work package. Consideration will also be given to special topics such as: overtraining & gender related sport issues.

### **PERS 20490 Exercise and public health (5 credits)**

The aim of this module is to provide students with the ability to critically evaluate current understanding of the role of exercise in the prevention and treatment of chronic disease from a population standpoint and a theoretical overview of the physiological mechanisms thought to underpin the beneficial effects of exercise. Students will be encouraged to evaluate the literature that attempts to elucidate our understanding of the role of exercise in the prevention of disease. At the end of the module, a successful student will be able to:

1. critically analyse the fundamentals of epidemiology and its relation to public health.
2. Understand the main relationships between physical activity, physical fitness, health status and psychological well being.
3. Outline and evaluate the physiological mechanisms which underlie common degenerative diseases.
4. Engage in an informed debate on the attributes of physical activity which contribute to a reduction in morbidity and mortality.
5. Review, consolidate and interpret current concepts from a range of sources in the field.

### **PERS 20190 Testing and evaluation of human performance (5 credits)**

This module serves to introduce the student to the concepts associated with evaluation of human performance in health and sport. It deals with issues such as health and safety in human performance testing, selection of appropriate test methodologies for evaluation of performance and provides theoretical and practical instruction in a variety of commonly used techniques.

### **PERS 20230 Neuromuscular and biomechanical lab testing (5 credits)**

This module will develop the student's core competencies in the testing and evaluation of human neuromuscular, sensorimotor and biomechanical performance. This module will be delivered through the combination of lectures and through extensive laboratory practical skill based sessions. Each topic will be presented as a separate work package. Each work package will be allocated different specific goals. These goals will be achieved through self-directed learning and through attendance at the laboratory practical skill based sessions. All material required for self-directed learning will be posted on Blackboard. The self-directed learning material will mainly take the form of specific journal articles which students will be required to read and critically analyse to achieve each of the goals specified for each work package.

### **PERF30260 Sports injury management (5 credits)**

This module addresses the patho-physiology and patho-biomechanics of the most common clinically encountered musculoskeletal injuries. This module will present students with the most up to date pathological, physiological and biomechanical data regarding the development of the most common clinically encountered musculoskeletal injuries. The emphasis will be on an advanced understanding of how these interact to contribute to the

development of these injuries. Furthermore the current best evidence regarding the treatment of each injury will be presented. The module content will be delivered in lecture format. Each topic will be presented as a separate work package. Each work package will be allocated different specific goals. These goals will be achieved through self-directed learning. All material required for self-directed learning will be posted on Blackboard. The self-directed learning material will mainly take the form of specific journal articles which students will be required to read to achieve each of the goals specified for each work package.

### **SMGT 30210 Skills acquisition (5 credits)**

The aim of this module is to understand the principles underlying skills acquisition. Specifically the students will learn the stages of motor learning, the cognitive processes underlying skills acquisition, how motor skills are acquired, how learning can be enhanced and why skills attempts might fail. Each class will comprise of theoretical and practical components designed to encourage student interaction, curiosity and discussion. Formal lecture times and work shop sessions will be used to foster understanding of the area with a focus on the application of motor learning theories in the 'real' world. A practical learning module will be used as a vehicle to evaluate and discuss hypotheses presented in the literature. Most often examples from sports will be used to clarify these, however it is important to keep in mind the principles and concepts introduced in class apply to any situation where movement is the primary means of achieving a particular goal (e.g. leisure activities, activities of daily living, rehab and sport).

### **PERS40070 Applied Sports Psychology and Skill Acquisition**

This module serves to provide students with a critical understanding of the role of psychology and skill / motor learning in optimising performance in sport. The module content will be divided into two sections. The first section will begin by examining applied psychological issues faced by sports performers such as "choking". This will be followed by an exploration of the psychological strategies and techniques which can enhance sport performance. The second section will focus largely on skill learning and the acquisition of expertise. An understanding of topics such as optimising practice conditions, perceptual training and deliberate practice will be developed. Throughout both sections of the module, the practical implications of this work from the perspective of both sport performers and coaches will be explored.

### **PERS40010 Exercise Physiology and Sports Nutrition (10 credits)**

This module will explore the physiological and metabolic responses to acute exercise and exercise training as they relate to sports performance and health across the lifespan. Skeletal muscle physiology and metabolism will be central to this exploration. Emphasis will be placed on the continuity between the physiological demands of sport and exercise, and the nutrition requirements of athletes and exercisers. Appraisal of the latest research on nutrition to support exercise training, sports performance and goal-orientated changes in body composition and health will underpin learning. An over-arching theme within the module will be the translation of theory into practice within exercise physiology and sports nutrition to develop both broad and goal-orientated exercise and nutrition strategies.

### **PHTY20260 Mindfulness and Health**

This module introduces students to the concept and practice of mindfulness in the context of personal and professional care. Students will understand the evidence for mindfulness based interventions in the reduction of stress and burnout. Students will understand the processes underpinning the stress response and the benefits of mindfulness based stress reduction techniques to manage reactivity and foster resilience. This module utilizes a variety of teaching and learning strategies including small group teaching, discussion groups and practical sessions which have a strong focus on experiential learning. Students will learn a variety of mindfulness practices including breath awareness, body scan, mindful movement and guided imagery. Students will be guided in the cultivation and establishment of a personal mindfulness practice.

### **PHTY20240 TAI CHI For Sport and Health**

This is an elective module designed primarily for Physiotherapy and other Healthcare students, who have an interest in Tai Chi Exercise and Applied Biomechanics. This module is delivered through practical or online teaching and will introduce students to the biomechanical principles of Tai Chi, and to Tai Chi movement(s) and exercises, for sport, health, physical coordination, and well-being. It focuses primarily on how to do a specific short solo Tai Chi Hand-Form, but also other Qigong and breathing exercises.

### **PHTY41030 Spinal Studies**

This is a 15-credit clinical module (Professional Certificate) delivered over two trimesters, that aims to educate healthcare professionals on the science of the vertebral column. It addresses the fundamentals of common pathologies and recent developments in treatment. Students will develop their knowledge base of functional anatomy and spinal pathology to allow them to recognise clinical patterns for diagnosis, treatment and delegation/referral. On completion of this module, the student will be able to:

1. Demonstrate knowledge and understanding of spinal functional anatomy
2. Demonstrate knowledge and understanding of spinal pathology and clinical presentations
3. Take a focussed spinal subjective history and perform a complete clinical examination
4. Understand the degenerative process and patients needs along this spectrum
6. Be familiar with various surgical strategies for spinal pathology
7. Create a problem list and treatment plan from a spinal patient presentation
8. Consider alternative evidence based diagnoses and treatments



### **PERS40040 The Science of Coaching: Theory**

This module will explore the science of coaching from a number of theoretical perspectives such as pedagogical (e.g. learning and transfer of learning, coach reflection and evaluation) social psychological (e.g., leadership styles, cohesion, group dynamics and achievement climate), philosophical (e.g. ethics and values) and sociological (e.g. power and cultural norms). From a practical perspective this module involves critical evaluation of academic theory utilising seminars with academic and industry experts. A vibrant teaching and learning environment will incorporate active student engagement, discussion and debate, student-centred and problem-based learning with an emphasis on reflection and peer-to-peer learning. On completion of this module students should be able to:

- Demonstrate a knowledge and understanding of disparate coaching philosophies and their application to practice.
- Critically evaluate and reflect on disparate coaching practices, styles and behaviours across a number of disparate sporting domains.
- Reflect on how their values, beliefs and experience impact on their coaching philosophy.
- Critically evaluate academic literature and its application to coaching practice.

### **PHTY41040 Health in a Global Society**

This module is an elective module on the online M.Sc. in Sustainable Development Programme. The curriculum explores the relationship between health and sustainable development, multiple determinants of health, global health challenges and health systems. Topics include: Health inequity, global burden of disease, factors underlying epidemiological trends in non-communicable disease; (diet and physical activity, aging, injuries); health systems; (health workforce, health service delivery in complex contexts)

### **PERS40070 Applied Sports Psychology and Skills Acquisition**

This module serves to provide students with a critical understanding of the role of psychology and skill / motor learning in optimising performance in sport. The module content will be divided into two sections. The first section will begin by examining applied psychological issues faced by sports performers such as “choking”. This will be followed by an exploration of the psychological strategies and techniques which can enhance sport performance. The second section will focus largely on skill learning and the acquisition of expertise. An understanding of topics such as optimising practice conditions, perceptual training and deliberate practice will be developed. Throughout both sections of the module, the practical implications of this work from the perspective of both sport performers and coaches will be explored.

### **PERS20190 Testing and evaluation in human performance**

This module introduces the student to the scientific concepts that underpin the evaluation of human performance in health and sport. It deals with issues such as health and safety in human performance testing, selection of appropriate test methodologies for evaluation of performance and the level of scientific rigour required when administering performance tests and analysing data. The module provides theoretical and practical instruction in a variety of commonly used techniques, and how to interpret data with respect to the associated physiological/functional capabilities that they evaluate.

## **PERS30010 Applied human health and sports performance**

After natural talent and appropriate training, nutrition is the next most important factor influencing sports performance. On the other hand, health risks linked to body composition, nutrient deficiencies and dietary habits are readily altered by manipulation of nutrient intake in the short- and long-term. This module builds upon existing modules in the sports and exercise sciences, and in particular the theoretical framework given in PERS20020, by exploring practical nutrition strategies in health and sporting contexts. Greater focus will be given to practical applications of current nutrition guidelines including meal planning and provision, food choices, and both broad and goal-orientated dietary strategies. Coursework in this module includes the recording and analysis of a personal food diary, an appraisal of a journal article, and a group-based presentation on a practical case study in either a health or sports setting.

## **PERS40020 Planning in strength and conditioning**

This module aims to provide students with advanced notions of strength and conditioning and its application to individual and team sports. It will promote discussion and critical evaluation of contemporary issues within the strength and conditioning literature in order to further refine and develop coaching practice. Students will be exposed to the most up to date research regarding physiological and neuromuscular responses to training methods. The module will place particular emphasis on the science underpinning planning and periodisation, with a review of advanced periodisation models. It will incorporate some practical work with applied scientific theory to bridge the gap between the science and application of strength and conditioning principles.

## **MDCS40230 Emergencies in Sport and Exercise Medicine**

There is a lack of both short day courses and longer certificate/diploma level courses in the management of Sports and Exercise Medicine (SEM) emergencies in Ireland. Short SEM emergency care courses historically have catered for both physiotherapists and doctors. While these courses have provided practical skills, supported by evidenced based medicine, they are time restricted and can lack important aspects of therapeutics and other essential core skills required for the SEM practitioner.

There is a diverse range of demands encountered in Irish sport range including track and field activities, equestrian events, motorsport and water-sports activities to name a few. In addition, members of the public attending such events may occasionally be the subject of a medical emergency. Thankfully, serious medical emergencies are infrequent but the diversity of settings and clinical problems encountered, now demands the development of a bespoke programme which provides training in the essentials of care.

Chartered Physiotherapists may be the sole practitioners available on the pitch-side in many sports at club or local level in the event of major trauma and/or medical emergencies. There is a clear need for physiotherapists to be competent and aware of emergency medical management protocols to be able to safely triage and identify life threatening injuries while still working within their scope of practice.

Furthermore, SEM practitioners working with individuals or at the pitch-side are exposed to potential life threatening emergencies both in Ireland and while travelling abroad (with different equipment available to them, and possibly different healthcare systems and EMS services).



This course will provide the practitioner with a deeper knowledge and understanding of the potential emergencies encountered when working in a broad range of SEM fields and there will be an emphasis on practical skills acquisition with the overall aim to provide more time to develop competencies in the pre-hospital management of a broad range of SEM emergencies.

### **Learning outcomes:**

- a) Develop advanced knowledge and advanced practical skills around key issues in advanced life support in cardiac emergencies including epidemiology, pathophysiology, pharmacology and therapeutics
- b) Develop advanced knowledge and advanced practical skills around key issues in advanced life support in trauma emergencies including epidemiology, pathophysiology including sports specific pitch-side skills of pain management and concussion, pharmacology and therapeutics
- c) Develop advanced knowledge and advanced practical skills of medical emergencies in sports medicine including epidemiology, pathophysiology, pharmacology and therapeutics
- d) Develop advanced knowledge and advanced practical skills of sports medicine leadership and management including major incident management, stadium and systems organisation/leadership and team work
- e) Develop advanced knowledge and advanced practical skills of specialised sports medicine subjects such as diving medicine, extremes of heat, and specialised sporting populations.

### **Graduate Attributes for Professional Certificate:**

Graduates will have acquired a comprehensive understanding of the theoretical management of these major emergencies. In addition graduates will have acquired an in depth understanding of the application of this knowledge to clinical cases through repetitive skills simulations and scenarios.

### **Indicative Module Content**

#### 1) Acute Cardiac Emergencies

General cardiology theory including acute coronary syndrome and cardiac life support management update  
Tachy/brady arrhythmias  
Pharmacology

#### 2) Acute Trauma Emergencies

General trauma theory  
Concussion and head injury  
Pain Management  
Pharmacology

#### 3) Medical Emergencies in sport

General assessment to acute medically unwell athlete.  
Workshop - Doctors bag – Equipment

#### 4) Sports Issues- Management/leadership and planning

Major incident planning - stadium/events  
Leadership and teamwork  
Medico-legal aspects of prehospital work

#### 5) Sports issues –Special circumstances and special populations:

Diving Medicine  
Managing in flight emergencies

Extremes of heat – Hypothermia and hyperthermia management  
An introduction to the managing the acutely unwell paediatric patient  
An introduction to other specialised populations