



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

UCD School of Public Health Physiotherapy and Population Science
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

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Contact Roisin 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):

Exercise and Health (Principals of exercise, Sports medicine, Fundamentals of strength and conditioning, Nutrition, Health promotion, Exercise in the life span)

Sports and exercise rehabilitation (Physiology of human movement, Kinesiology & taping, Sports psychology, Exercise, nutrition and health, Health promotion)

Primary care and Health (Exercise in the lifespan, Exercise and public health, Psychology of sports and health I & II, Introduction to Nutrition, Health promotion, Health management)

Modules can be taken individually as CPD, or 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

SMGT40230 Enterprise and Development (5 credits) ●2
SMGT40190 Sport and Exercise Law (5 credits) ●2
SMGT30210 Skills acquisition (5 credits) ●2
SMGT30240 Principles of exercise management (5 credits) 1
SMGT30170 Applied exercise management (5 credits) 2

Public Health

PHPS 40370 Aetiology of Disease (5 credits) 1
PHPS 40470 Health Economics (5 credits) 1
PHPS 40040 Public Health Practice (5 credits) 1
PHTY 40420 Environment & Health (5 credits) 1
PHPS 40480 Health Management (5 credits) 2
PHPS 40300 Health Promotion (5 credits) 2
PHPS 40380 Health and Social Sciences (5 credits) 1
PHPS40050 Nutritional epidemiology (5 credits) 2
PHPS40440 Sociology of health and illness (5 credits) 2
PHPS40650 Global health threats (5 credits) 2

Acupuncture

PHTY 40020 Theory of Acupuncture – Traditional and Modern (5 credits) β 1
PHTY 40050 Organ Systems (5 credits) β 1
PHTY 40060 Point Location (5 credits) β 1
PHTY 40040 Safety & Contra-indications in needling techniques (2.5 credits) β 2
PHTY 40100 Rheumatology & Sports Injuries (5 credits) β 2
PHTY 40410 Clinical Placement 1 (7.5 credits) β 2
PHTY40180 Obstetrics & gynaecology (7.5 credits) ∞ 1
PHTY40030 Diagnosis (5 credits) ∞ 1
PHTY40110 Skin, respiratory conditions (5 credits) ∞ 2
PHTY40090 Chronic pain patterns (10 credits) ∞ 2
PHTY Clinical placement II (7.5 credits) ∞ 2

Research

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

Physiotherapy

PHTY40130 Physiology of Human Movement (5 credits) β1
PHTY40200 Sports biomechanics & Physiology (5 credits) β1
PHTY40140 Principles of exercise (2.5 credits) β1
PHTY40160 Kinesiology & taping (5 credits) ∞*1
PHTY40350 Clinical / team practice (2.5 credits) ∞*1
PHTY40330 Performance testing and exercise in special groups (5 credits) β2
PHTY40430 Functional anatomy (5 credits) β2
PHTY40320 Functional rehabilitation (2.5 credits) β*2
PHTY40360 Sports psychology (2.5 credits) ∞2
PHTY40280 Pathology & diagnosis (5 credits) ∞2
PHTY40340 Sports medicine (5 credits) ∞2
PHTY20240 Tai Chi for Sport and Health (5 credits) 1
PERS20010 Advanced strength and conditioning (5 credits) 1
PERS20130 Psychology of sport and health I (5 credits) 1
PERS20170 Optimisation of human performance (5 credits) 1
PERS30260 Sports injury management (5 credits) 1
PERS20200 Exercise and public health (5 credits) 1
PHTY10010 Fundamentals of strength and conditioning (5 credits) 2
PERS20180 Psychology of sport and health II (5 credits) 2
PERS20190 Testing and evaluation of human performance (5 credits) 2
PERS20230 Neuromuscular and biomechanical lab testing (5 credits) 2
PERS30290 Exercise in the life span (5 credits) 1

PERS40050 Applied Physiological and Performance Testing in Sport (10 credits) 2
PERS40070 Applied sports psychology and skill acquisition (10 credits) 2
PERS40010 Exercise physiology and sports nutrition (10 credits) 1
PERS40020 Strength and Conditioning for Sport and Exercise (10 credits) 2
PERS40040 The Science of Coaching: Theory and Practice (10 credits) 1
PERS40060 Sports and Performance Analysis for Coaches (10 credits) 2

Occupational Health and Safety

OSH40020 Occupational Health (5 credits) 2
OSH40050 Human and organisational behaviour at work (5 credits) 1
OSH40010 Health and safety management (5 credits) 1

*∞ Modules run in 2016/2011, β Modules run in 2015/2016, All other module run annually, * Must have 2 years clinical experience, • Modules run fulltime over a 1 week block, 1=semester 1, 2=semester 2*

Graduate Certificate / Graduate Diploma / MSc Advanced Physiotherapy Studies

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

Course	Credits Required	Mode	Division of Modules
Graduate Certificate	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
Graduate Diploma	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
MSc	As for Graduate Diploma + Dissertation (30 credits) Semester 3 (summer)		

Module Descriptors

Sports & Exercise Management

SMGT40190 Sport and Exercise Law (5 credits)**

This module will identify and illustrate aspects of sports law and its particular relevance to the administration and management of sport in Ireland and internationally. The module aims to provide an understanding of the current state of interaction between sport and the law providing an opportunity for participants to learn from key industry practitioners and academics. Students will learn how to analyze, interpret and apply key legal issues as they impact on sport including, the sports regulatory regime, sport and criminal and civil liability, commercial aspects of sport, player representation, event management and sports broadcasting.

SMGT40150 Principles of Exercise Management (5 credits)**

This module introduces students to the interdisciplinary approach to exercise prescription used by exercise professionals and physical activity programme co-coordinators. The syllabus examines the basic roles and responsibilities of the exercise specialist in the initial consultation process and challenges the student to develop prescriptive skills for clinical, sporting and general populations. Students will also develop the analytical skills required to assess individual needs, set goals and prepare and evaluate long-term exercise plans for a diverse range of clients in a variety of settings.

SMGT40230 Enterprise and Development (5 credits)

This module will introduce students to the underlying theories and practices of sports business strategy formulation and the designing of the sport business processes and procedures. The syllabus includes the process of starting up a sport business, franchising and the creation of a business plan and resource provision strategy. The module concludes with the development of the marketing, distribution and pricing policy for the sport business. On completion of this module students should be able to: 1. Demonstrate knowledge and understanding of strategy formulation, industry analysis, competitive advantage, and the sports industry regulatory framework; 2. Design a sport business including planning the business, and managing operations; 3. Critically assess the paths to business ownership including, entrepreneurship and small business, starting a business, acquiring a business and franchising, and choosing a legal form of business; 4. Effect the planning and organizing of the sport business by developing the business plan, creating a management team, and preparing a human resources plan; 5. Critically evaluate a marketing for growth strategy by conducting market research in a global environment, deriving a distribution and pricing policy, and developing a marketing plan from start-up through growth.

SMGT30210 Skills Acquisition (5 credits) 2

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).

SMGT30170 Applied exercise management (5 credits)

This module applies the principles of exercise management to the practical management of fitness and exercise services and facilities. The module discusses the implementation of areas including logistics, HRM, marketing and price structuring, and students will visit a local facility to conduct an operational audit. On completion of this module, students should be able to: (i) understand the position and particularities of the exercise industry within the broader sport and physical activity market; (ii) apply basic business and industry specific principles to the practical management of fitness, exercise and leisure services and facilities; (iii) monitor exercise and nutrition programmes for a range of common client types; (iv) understand and supervise the implementation of typical exercise programmes.

***** Sports modules – run full-time for a week***

Public Health and Primary Care

PHPS40370 Aetiology of Disease (5 credits)

The epidemiology of certain important non-communicable diseases is examined (cardiovascular and respiratory diseases, obesity, diabetes mellitus and certain cancers). Strategies for primary, secondary and tertiary prevention are explored. 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 taught. On completion of this module students should be able to: understand the basic principles of Epidemiology, identify the major chronic diseases and describe their epidemiology, compare trends in Ireland and abroad, and understand screening and its implementation in the Irish setting.

PHPS40470 Health Economics (5 credits)

This module is specifically tailored to non-economists. It will provide an introduction to main concepts in health economics (opportunity cost, equity, efficiency, scarcity) and an overview of economic principals with particular application to health care. There will be a strong emphasis on application of concepts to health-related and policy questions. The main areas covered are demand for health and healthcare, resource allocation, supply and demand, healthcare a commodity, decision-making under uncertainty, economic and health behaviour, welfare and economics and economic evaluation. On completion of the modules students will have an understanding of the main concepts in health economics and an expansion of economic literacy, an understanding of main economic principles and how they apply to healthcare, with a particular focus on practical application. They will also have an understanding of the use of economic approaches in health decision-making and its application to problem-solving in the health policy arena, be able to broadly evaluate policy prescriptions and describe policy outcomes, and identify and define the main concepts in economic evaluation and understanding of the process involved in undertaking an evaluation.

PHPS40480 Health Management (5 credits)

This module will blend theory into practice bring an application focus of: 1. Management Principles – Introduction to management strategic planning, organising and change management, leadership, organisational control and motivation. 2. Applied management – analysing the application of management principles within the existing healthcare framework focusing on planning and budgetary control, management in practice, performance indicators, and efficiency controls. Examining key initiatives in service provision within the health sector.

PHPS40040 Public Health Practice (5 credits)

This module seeks to explore the basic principles of public health. Students are introduced to the role and source of health information and are provided with practical examples of public health practice such as cluster investigation. Variations in health status and health inequalities are highlighted. The structure, organisation and funding of Irish health services, and specifically public health services is examined. By the end of the course students will have an understanding of the concepts of public health and the organisation, structure and function of the health services. They will have critically appraised the health information systems and have been introduced to practical examples of good public health practice.

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

PHTY40420 Environment & Health (5 credits)

This module provides a broad overview to environmental epidemiology and environmental public health. It includes a history of environmental epidemiology, an introduction to its main principles and detailed lectures on aspects of environment and health that are currently considered priority nationally and internationally. This includes lectures on sanitation and food hygiene, environmental hazards such as electromagnetic radiation, chemicals, cluster investigation, planning and preparedness and methods for risk management. This module also applies the public health perspective to environmental health. Students will be provided with knowledge of the principles of environmental epidemiology and practice of environmental health including the role of the environmental health officer in both the Health Service Executive and Local Authorities.

PHPS 40380 Health and Social Sciences (5 credits)

This module examines the role of psychological factors in the aetiology of well-being., illness and disease. An introduction to human psychology is given and the programme then covers the following areas: health beliefs, attitude and attitude change, stress, coping and health, lifestyle and health, psychological issues in health promotion, and general applications of psychology to public health. The module includes a general introduction to the concept of health policy. The course explores topics such as: criteria for the evaluation of healthcare systems, the concept of effectiveness, accessibility, quality and integration of health and healthcare systems, the concept of efficiency (industrial, technical, allocative) in healthcare, the finance of healthcare, Ireland and Irish healthcare systems in an international perspective

PHPS40050 Nutritional epidemiology (5 credits) 2

The overall aim is to ensure that the student develops an understanding of the relationship between nutritional exposure with non-communicable disease, and the methods of researching this relationship. On completion of this module students should be able to identify appropriate research design and methods employed to measure nutritional exposures and outcomes; understand the advantages and limitations of nutritional assessment methods; design, plan and evaluate nutritional epidemiological studies; describe the dietary exposures associated with chronic disease.

PHPS40440 Sociology of health and illness (5 credits) 2

This advanced module will introduce Students to sociological factors that impinge on health status, health chances and health policy. It will consider historical as well as recent substantive and theoretical issues pertinent to health and health care. This will include focusing on quantitative and qualitative research and current debates surrounding social and health capital and critical realist perspectives. By the end of the course students should be able to demonstrate an awareness of the problems of conceptualising health and illness and the implications of such problems; show an appreciation of some key theoretical approaches within sociology to the study of health, illness and health care; understand the relationship between states of health and social forces; and compare and contrast sociological and anthropological perspectives of health and illness.

PHPS40650 Global health threats (5 credits) 2

This module addresses global health threats, looking at a number of specific major threats to health in the 21st century - communicable diseases, climate change and nutrition. It explores public health risk management and how the international community responds to global health threats. It examines the structures for health governance at global and national levels and mechanisms for policy and planning, financing, coordination and evaluation. The world faces repeated communicable disease threats, from both existing diseases and new emerging infectious agents such as SARS and pandemic influenza. The module looks at international coordination in responding to global communicable diseases and the role of the international health regulations.

Climate change has been described in the Lancet as the biggest global threat to health in the 21st century. This part of the module will examine why climate change is a threat to health both directly and indirectly. Climate change and health features to be explored include food security, communicable diseases and disasters with a focus on how the world is and should respond to the threat through mitigation and adaptation measures.

Nutrition is one of the key elements of primary health care and a major determinant of good public health in developing countries. The module provides an overview of the global nutritional situation especially pertaining to malnutrition including vulnerable groups, women and children, micro-nutrient deficiency, and the inter-relationship between infection and malnutrition.

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.

Physiotherapy (all modules run on a Friday)

PHTY 40130 Physiology of Human Movement (5 credits)

This module aims to increase the students understanding of muscle physiology, control of movement and normal and pathological pain mechanisms. The module contains study of muscle structure, energy use and supply, fatigue and the effects of training. It furthermore exposes the students to the mechanisms of motor control and motor learning. The peripheral and central pain mechanisms and the modulation of pain will be studied.

PHTY 40200 Sports biomechanics & Physiology (5 credits)

This module aims to increase the students understanding of the cardiorespiratory system at rest, during exercise and to gain an understanding of the nutritional demands for exercise. The module aims to teach the students a qualitative approach to understanding biomechanics of sports and exercise.

PHTY 40140 Principles of exercise (2.5 credits)

The aim of this module is for the students to gain an understanding of the principles of training, overload, specificity, periodization and detraining. The students will study the theory and methodology of strength and endurance and flexibility training. The concept of functional and sports/task specificity is studied and applied.

PHTY 40330 Performance testing and exercise in special groups (5 credits)

This module will enable to student to select appropriate methods, perform testing and screening of human performance. The module furthermore aims to give the student an understanding of special considerations of exercise in regards to age, gender, and disability.

PHTY 40430 Functional anatomy (5 credits)

This module will enable the student to gain an understanding of the structure and function of the human anatomy. It will encourage the students to integrate the knowledge of anatomy in the clinical setting of physiotherapy.

PHTY 40320 Functional rehabilitation (2.5 credits)*

This module aims to introduce the student to a number of functional training methods and the underlying evidence base. The students will learn how to apply and design programmes including the different exercises modes to various pathologies and sports.

PHTY 40160 Kinesiology & taping (5 credits)*

This module aims to increase the students understanding of analysis of human movement and of lower limb patho-mechanics. The evidence-based practice and application of orthosis and tape in physiotherapy management will be studied. Friday 14th & 21st November 2014 full days + either 15th (Sat) or 22nd (Sat) – the Sat dates to be confirmed

PHTY40360 Sports psychology (2.5 credits)

This module will enable the students to develop an understanding of the role of the physiotherapist in the sports setting. It will advance the previous knowledge and use of evidence-based practice in sport / function of specific exercise, soft tissue and joint treatment in relation to different injury stages. This module also provides a basis for the assessment of foot and ankle patho-mechanics and for experience in various taping techniques. Students will learn to work with a sports team setting.

PHTY 40350 Clinical / team practice (2.5 credits) *

This module is designed to advance the level of clinical practice in the area of sports physiotherapy. The student will be expected to carry a sports physiotherapy specific patient

load. The students are expected to integrate the previous course content, use evidence-based practice into clinical physiotherapy practice, and apply structured clinical reasoning.

PHTY 40280 Pathology & diagnosis (5 credits)

This module aims to increase the student's knowledge in specific musculoskeletal pathologies and the recent developments in evidence-based treatments and diagnosis. The students will furthermore develop their skills in presentation and critical appraisal of publications.

PHTY 40340 Sports medicine (5 credits)

This module aims to introduce the student to the current practice and recent developments in sports injury management in sports medicine. The student will gain an understanding of the roles of the physiotherapist in the larger context of sport exercise and health care. The student will obtain a certificate in on-field aid management.

PHTY 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.

PHTY 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

PHTY20240 Tai Chi for Sport and Health

This is an elective module for Physiotherapy and Health and Performance Science students with an interest in Tai Chi Exercise and Applied Biomechanics. This module is delivered through practical teaching, and will introduce students to the biomechanical principles of Tai Chi and to Tai Chi movement(s) for sport, health, physical coordination, and well-being. It focuses on two main areas of: (i) how to do a specific short Tai Chi Hand-Form and specific basic Chi-kung exercises; (ii) how to do specific basic Tai Chi Pushing Hands exercise(s).

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 20170 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.

PERS 30290 Exercise in the life span (5 credits)

This module discusses the best strategies to offset both cognitive and physical deterioration. Population statistics estimate that, in the next 20 years, the number of adults in the post-50 age group in Europe will have grown significantly. It is important that it is not solely the life span that increases for this population but also the quality of life. The key to an enhanced quality of life is the necessity to maintain activity, both physical and cognitive. This module begins to help the student understand the ageing process in order to support them through activity programmes. In particular on completing the course the students will have: illustrated the cardio-respiratory response to functional activity at different age groups, discussed the reproductive hormonal changes associated with later life with special reference to the bone metabolism, reviewed the musculoskeletal, sensory motor impairment and neural changes associated with ageing.

*** Must have two years of relevant physiotherapy experience**

Acupuncture (all modules run on Saturdays & Sundays except clinical placement)

PHTY 40020 – Theory of Acupuncture – Traditional and Modern (5 credits)

This module will introduce the student to the Traditional theory of Acupuncture and its place in Chinese Medicine. It will also introduce modern theory and review research to support theory. It will inform the student of the place of Acupuncture in Physiotherapy Practice. On completion of the module students will have an appreciation of the complexities of Traditional Theory, have some understanding of the holistic approach to treatment, some understanding of modern theory and problems of sufficient proof, and an understanding for when an individual is suitable for Acupuncture treatment.

PHTY 40050 – Organ Systems (5 credits)

This module explores the traditional methods of looking at the Physiological functions of systems (Zang Fu). Holistic approach to health and wellbeing will also be taught. Body

functions will be described in a traditional way, and the student will be prepared for diagnosis of imbalance in these. On completion of this module students will have a knowledge of the traditional systems, be prepared for diagnosis of imbalance in these traditional systems, and be able to utilise knowledge of systems to help in diagnosis.

PHTY 40040 – Safety & Contra-indications in needling techniques (2.5 credits)

Acupuncture is safe but not without side effects. Injuries that might occur will be discussed, and hygiene and infection control considered. The student will learn International Guidelines for risk factors and contra-indications during needling techniques. On completion of this module students will know risk factors, contra-indications, risks of infection prior to using needling techniques. They will be in a position to judge when a patient is suitable for Acupuncture treatment, and plan a course of treatment which will be safe and effective.

PHTY 40100 Rheumatology & Sports Injuries (5 credits)

This module teaches contra-indications, traditional theory, diagnosis, and treatment plans for Rheumatology, Pain & Sports Injury problems usually seen in an Acupuncture Practice. On completion of this module the postgraduate students should be able to understand and discuss Rheumatology & Sports injury related pathology, determine when patients with Rheumatology & Sports injury conditions are suitable for acupuncture treatment, have a knowledge of contra-indications to acupuncture treatment in patients presenting with Rheumatology & Sports injury conditions.

PHTY40060 Point Location (5 credits)

Acupuncture points are well defined areas. The most common points on upper and lower limbs, face, head, back and trunk will be taught. Functions relating to these points will be explained. On completion of the module students will have reviewed functional human anatomy, have developed an accurate location of points that are a vital component of the course, be expected to practice point location, and know point location and name/number.

PHTY40410 Clinical Placement 1 (7.5 credits)

During clinics students will undertake the following supervised tasks; observation of Acupuncture, discussion of diagnosis in a clinical setting, needling practice, moxa practice, electro-acupuncture observation will take place. There is an opportunity to experience all pathologies treated by the Acupuncturist. On completion of the module students will have become familiar with practice routine and setting, be able to discuss differential diagnosis and pain treatment regimes, be familiar with techniques of treatment, plan a safe treatment plan, and needle safely.

PHTY40180 Obstetrics & gynaecology (7.5 credits)

This module teaches contra-indications, traditional theory, diagnosis, and treatment plans for obstetrics and gynaecological problems usually seen in an Acupuncture Practice. On completion of this module the postgraduate students should be able to understand and discuss obstetrics & gynaecology related pathology, determine when patients are suitable for acupuncture treatment, have a knowledge of contra-indications to acupuncture treatment in these patients, and be able to develop an appropriate treatment plan for patients with obstetrics and gynaecology conditions.

PHTY40110 Skin & Cardio-respiratory conditions (5 credits)

This module teaches contra-indications, traditional theory, diagnosis, and treatment plans for skin problems usually seen in an Acupuncture Practice. On completion of this module the postgraduate students should be able to understand and discuss skin & cardio-respiratory related pathology, determine when patients with skin & cardio-respiratory conditions are suitable for acupuncture treatment, have a knowledge of contra-indications to acupuncture treatment in this patient cohort, and be able to develop an appropriate treatment plan for patients with skin & cardio-respiratory conditions.

PHTY40090 Chronic Pain Patterns (10 credits)

This module teaches contra-indications, traditional theory, diagnosis, and treatment plans for chronic pain problems usually seen in an Acupuncture Practice. On completion of this module the postgraduate students should be able to understand and discuss chronic pain related pathology, determine when patients with chronic pain conditions are suitable for acupuncture treatment, have a knowledge of contra-indications to acupuncture treatment in this patient cohort, and develop an appropriate treatment plan for patients with chronic pain conditions using acupuncture.

PHTY40240 Clinical Placement II (7.5 credits)

During clinics students will undertake the following advanced supervised tasks; observation of acupuncture, discussion of diagnosis in a clinical setting, needling practice, moxa practice, and electro-acupuncture observation will take place. On completion of this module the Postgraduate student should have become familiar with advanced practice routine and setting, be able to discuss differential diagnosis and pain treatment regimes, be familiar with advanced techniques of treatment, plan a safe treatment plan for all pathological conditions, and be competent in needle safely.

All acupuncture modules run on a Saturday and Sunday. (Need 10 students in a class to run modules)

Coaching and Exercise Science

PERS40050 Applied Physiological and Performance Testing in Sport (10 credits)

This module will incorporate a number of frontal lectures (n=9) with a series of laboratory and field practicals (n=6). In particular, the most advanced techniques used in applied exercise physiology to investigate the human body's response and adaptations to exercise will be presented and discussed. These techniques will include those used to study and quantify metabolic responses, neuromuscular function and cardio-respiratory adjustments to exercise. Students will gain practical experience in the scientific process and come to understand and perform these techniques. In addition, through dedicated tutorials and seminars group of students (n=4) will discuss and present a pre-selected research paper (this will form part of the continuous assessment). Semester 2 Fridays 10-1pm

PERS40070 Applied sports psychology and skill acquisition (10 credits)

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. Semester 2 Fridays 10-1pm

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.

PERS40020 Strength and Conditioning for Sport and Exercise (10 credits)

The graduate-level module aims to 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.

PERS40040 The Science of Coaching: Theory and Practice (10 credits)

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), psychological (e.g. enjoyment, competence, motivation and confidence), 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 the design and evaluation of a personal coaching portfolio. Consideration will also be given to the role of the coach in the community as an enabler of healthy lifestyle activities.

PERS40060 Sports and Performance Analysis for Coaches (10 credits)

The goal of this module is to support the emerging sub-discipline of performance analysis within the sport and exercise science service provision framework. The role of the performance analyst in professional practice will be emphasised in this module, encouraging students to explore the route to professional accreditation. The evidence base underpinning this field will be evaluated and applied throughout the course. Assessment within the module is based on experiential learning, where students will perform a real-world case study requiring careful planning and execution of a performance analysis intervention – either tactical or technical – to include: identification of key performance indicators, video capture, data analysis, data interpretation, data presentation and feedback, recommended intervention, evaluation of intervention and reflection on the performance analysis/coaching interface. Innovation and performance modelling in the field of performance analysis will also be explored.

All classes take place on a Thursday 6 to 9pm or Fridays 10 to 1pm and 2 to 5pm

Occupational Health

OSH40020 Occupational Health (5 credits) 2

This module addresses the effects of work on health and enables students to identify risks to health in the workplace, to advise management on methods to investigate the incidence, and reduce the risk of, ill health. Occupational disease prevention, health surveillance and management, rehabilitation and workplace health promotion are addressed. At the end of this module students will be able to: (i) recognise where occupational health is placed within national occupational safety and health management and public health strategies, (ii) demonstrate advanced knowledge of the risks to the health of employees in the workplace and associated work-related illness and occupational diseases, (iii) critically evaluate the systems used for managing occupational health in the modern work environment, (iv) argue

the rationale for current occupational health interventions using an evidence-based approach.

OSH40050 Human and organisational behaviour at work (5 credits) 1

This module examines human and organisational behaviour in the context of safety and health at work, and requires students to apply this knowledge to the improvement of the working environment and the promotion of safe work practices. At the end of this module students will be able to: (i) integrate current knowledge of the principles of ergonomics into a workplace setting, evaluate the need for ergonomic interventions, understand the musculoskeletal risks to the human body from inappropriate ergonomic design, and recommend appropriate solutions; (ii) evaluate the relevance and influence of individual, group and organisational factors on human behaviour in the workplace in the context of safety and health; (iii) demonstrate knowledge of the theories underpinning approaches recommended for learning and training, communications, culture, and stress management in the context of OSH.

OSH40010 Health and safety management (5 credits) 1

This module introduces students to the principles of risk management, in the context of occupational safety and health, and to the systematic management of occupational safety and health, including the development and implementation of effective systems to reduce the risk of injury and loss. At the end of this module students will be able to: (i) demonstrate a high level of knowledge about, and the evidence base for, health and safety management systems and their constituent components, such as: policy development and implementation, planning, methods of communication and consultation, reactive and proactive performance measurement systems, and auditing and review systems in OSH, (ii) demonstrate familiarity with relevant literature and legislation. Critically analyse systems in current use.