NUI Galway
OÉ Gaillimh

MSc in Exercise Physiology and Rehabilitation

The **MSc in Exercise Physiology and Rehabilitation** will provide knowledge and skill sets required for exercise prescription in a clinical setting. Physical interventions consisting of personalised exercise is a crucial component of rehabilitation programmes for people recovering from chronic disorders and musculoskeletal injury. These interventions when tailored to the individuals' current physical fitness can help to reduce the symptoms of disease and improve their physical function and quality of life. Such physical interventions also help to reduce the risks of developing further comorbidities. This course will help qualified **physiotherapists obtain specific skills in applying exercise physiology interventions in a clinical setting for rehabilitation of patients and obtain the compulsory CPD credits required for their professional development and progression**.

About this Programme

This course is designed to provide qualified physiotherapists advanced knowledge and training in the development and application of exercise interventions in the rehabilitation of various chronic diseases.

Students will develop an advanced knowledge of exercise physiology including in-depth understanding of physiological processes that occur during exercise. Students will understand how these changes are beneficial to improving health and fitness. Students will have a clear understanding of the methods of evaluation that can be used to assess these changes, to evaluate the fitness level and to plan and prescribe an exercise programme that will be beneficial to the individual as a therapeutic intervention in certain chronic disease settings.

Course level: Level 9

Duration:
3 semesters or 15 months (September – November). Semester 1-2 is available in both taught and blended learning formats (Part time options available)

Entry Requirements:
(Level 8) Bachelor's degree in Physiotherapy, Physical Therapy or Occupational Therapy, with a minimum score of 2.2.

Fees: EU €8500, Non-EU €17000

This unique course will enable students to –

- Develop a comprehensive knowledge of Exercise **Physiology**
- Learn to evaluate the various **Physiologic Responses** to **Exercise**
- Learn to prescribe an **Exercise Programme** as a **Therapeutic Intervention** in a **Clinical** setting
- Obtain **Professional Recognition** in the form of CPD credits

www.nuigalway.ie/exercisephysiology

Why study this programme?

This new course will help physiotherapists and physical therapists obtain new and enhanced learning opportunities and develop skills in applying exercise physiology interventions in a clinical setting for rehabilitation of patients suffering from musculoskeletal injury or limitations and in patients recovering from chronic diseases which affect physical function and quality of life. The MSc in Exercise Physiology and Rehabilitation will provide an opportunity for students with qualifications in Physiotherapy, Physical Therapy or Occupational Therapy who wish to take their career to the next level - whether in a leadership role, in academic research or by advancing their clinical expertise and developing experience and expertise in clinical exercise testing and exercise prescription in a wide variety of disease settings. This course will equip students with knowledge and experience in performing physiologic exercise tests to assess cardiovascular health, respiratory health, neurological and musculoskeletal capabilities. The students will obtain training in providing tailored exercise programmes for patients suffering from chronic diseases including cardio-respiratory disorders, obesity, diabetes, neurological and musculoskeletal limitations and cancer.

Programme Outline

Topics featured in the 3course lecture/seminar series include nerve-muscle physiology, cardiorespiratory physiology, kinesiology, integrated physiological responses to exercise and methods of evaluation, metabolism and nutrition in exercise and rehabilitation, methods of physiological assessment during exercise in clinical populations and scientific principles of exercise prescription.

Students will gain **hands on experience** in conducting exercise tests and physiological assessment of fitness in both healthy and clinical populations. Semester 1–2 will be taught through lectures and tutorials set in a **Blended learning mode**: All modules (1–6) will be available online via an online interactive learning platform and supported through virtual classrooms.

Online students will engage with pre-recorded lectures on blackboard on a weekly basis. To support engagement, discussion and interaction, **weekly online meetings, discussions and tutorials will follow the lectures**.

All students will engage with **continuous assessments**. Students will be assessed during each semester by continuous assessments and end of semester exams. In module 7 in semester 2, students will attend a three week long hands-on training workshop to gain practical experience in exercise testing and physiological methods of evaluating human performance and application of their knowledge in exercise prescription. Students will also attend a workshop in professionalism and learn about the roles and responsibilities of physiotherapist in a rehabilitation setting.

In semester 3 students will complete a work placement for six weeks. For the clinical placement module, the students will complete a reflective journal reporting their experience and also complete a case study report reviewed during their clinical placement. Students will also have the opportunity to present their work at a the Exercise is Medicine research symposium.

Professional Recognition and Accreditation Opportunities

Course syllabus is aligned to **CORU** recommendations in Ireland and **American College of Sports Medicine (ACSM)**. Upon completion students will be able to obtain CPD points. Students will also be eligible for Clinical Exercise Physiologist certification from ACSM. International students with an appropriate undergraduate degree in Physiotherapy will be able to apply for registration in Ireland.

Upon completion of the course students will receive appropriate professional qualification and recognition.

Conference

At the end of Semester 3 students will participate in a one-day **research symposium in Exercise is Medicine** organized by the course director where students will have an opportunity to showcase their work.

Employment and Career Opportunities

This course is designed to give professional qualification and recognition to Physiotherapists and Physical therapists interested in progressing their career and obtaining a new skill set.

Course Table

Taught and Online → **Taught only**

Semester 1 (30 ECTS)

Module 1: Essentials of Exercise Physiology, Biomechanics, Kinesiology. (10 ECTS)

Module 2: Integrated Physiology and Responses to Exercise. (10 ECTS)

Module 3: Metabolism and Nutrition in Rehabilitation. (10 ECTS)

Semester 2 (35 ECTS)

Module 4: Physiological Evaluation of Exercise. **(Rehabilitation I)** (10 ECTS)

Module 5: Exercise as Therapy. **(Rehabilitation II)** (10 ECTS)

Module 6:
Experimental Laboratory module: Physiological Effects of Exercise.

Workshop module: Exercise Physiology and Methods of Assessment, Case Studies in Exercise Prescription.

Professionalism, Ethics and Code of Conduct. (10 ECTS)

Module 7: Elective module (5 ECTS)
- Biomechanics
- Research Methods and Statistics in Sports
- Community Engaged Learning and Outreach
- Qualitative Research Methods

Semester 3 (25 ECTS)

Module 8: Work Placement in an Approved Physiotherapy Unit.

Case Study Report and Dissertation

Exercise in Medicine Symposium

Masters

Postgraduate Diploma (Contingency Exit Route)

https://www.nuigalway.ie/exercisephysiology

Contact information/Enquiries to:

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