

## MODULE DESCRIPTOR

<b>MODULE TITLE</b>	<b>EXERCISE FOR SPECIAL POPULATION GROUPS</b>		
<b>MODULE CODE</b>	<b>XS4013 (L7)</b>	<b>CREDIT VALUE</b>	<b>5 ECTS</b>
<b>SCHOOL</b>	SCHOOL OF SCIENCE		

### MODULE AIMS

Develop the knowledge and practical skills on sport and exercise in special population groups: 1) Children from the neonatal stage up to adolescence, 2) Pregnant women, 3) Elderly, 4) People with mobility problems, 5) People with medical co-morbidities.

Identify the anatomical and physiological differences seen in these population groups that affect sport and exercise performance, as well as capabilities.

Present the exercise needs in these special populations groups.

Develop individualised training protocols for performance, injury prevention and injury management.

Identify the pathophysiology of the medical condition and highlight the physiological differences (e.g. in the case of children/elderly)

Focus on the role of exercise in the prevention and treatment of these conditions, and modifications of exercise prescriptions for these populations.

### MODULE CONTENT

#### **Psychology:**

- Psychosocial issues & strategies for special populations
- The role of goal setting
- How we approach and communicate with people in these groups
- Why exercise is important and how it can benefit mental and emotional health of these groups

#### **Anatomy & Physiology in Special Population groups**

Bone & muscle & neural anatomy and physiology parameters relevant to sport & exercise

Skin and subcutaneous tissue anatomy and physiology parameters relevant to sport & exercise

Heart & Lungs anatomy & physiology parameters relevant to sport & exercise

Athlete recovery

Effects of Medical co-morbidities on sport & exercise capacity

#### **Training and Performance planning**

Identifying athletes' needs

Defining athlete's targets and measuring performance

Formulating a sport & exercise plan

#### **Therapeutic sport & exercise:**

Understanding medical conditions' effects and therapeutic needs

Defining targets and role of sport & exercise within the context of disease

Formulating a sport & exercise plan

Ethical issues and responsibilities

### INTENDED LEARNING OUTCOMES

On successful completion of this module a student will be able to:

1. Identify the pathophysiology for a range of special populations.

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2. Critically evaluate the physiological mechanisms associated with the benefits of exercise training in special populations.
  3. Design an exercise plan for a special population group.
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## **TEACHING METHODS**

This module will be delivered through a series of lecture sessions, assignments for self-directed search/study, and presentation/debate sessions. Lecture sessions aim towards teaching the background scientific knowledge and stimulating the students towards self-directed learning via assignments that will be requested as part of the assessment methods. Part of the lecture sessions will be used to develop the presentation skills of a proposed plan. Peer assessment will also be practised in order to develop the skill of constructive feedback. The students will be asked to work on a case-based format and in teams, in order to read/understand the relevant literature and taught material, as well as put them into practice. There will be eLearning material and sample cases for students to work during their own time and on their own initiative, to consolidate and cultivate their knowledge and skills.

## **ASSESSMENT METHODS**

This module is assessed through an essay and an Oral-PowerPoint presentation.