

## MODULE DESCRIPTOR

<b>MODULE TITLE</b>	The Basis of Human Movement		
<b>MODULE CODE</b>	XS1159	<b>CREDIT VALUE</b>	20 UK / 10 ECTS
<b>SCHOOL</b>	SCHOOL OF SCIENCE		

### MODULE AIMS

The aim of the module is to provide students with a fundamental knowledge and understanding of key aspects of biomechanics and movement mechanics in sport and the musculoskeletal system. This module will use a theoretical base to develop the basic understanding of key areas and, importantly, the application of theoretical principles.

### MODULE CONTENT

*Range and depth of material to be covered typically includes:*

- Human mechanics in sport:
  - o Force and moments
  - o Posture
  - o Balance
  - o Gait
- Clinical mechanics:
  - o Mechanics and musculoskeletal injury
  - o Arthro-kinematics and osteo-kinematics.
  - o Use and overuse injuries
  - o Functional movement screening techniques
  - o Assessment of human movement
- The Soft tissues:
  - o Skin
  - o Muscle
  - o Tendon
  - o Ligaments
  - o Tissue repair and the healing process.

### INTENDED LEARNING OUTCOMES

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

1. Describe the basic biomechanical principles, relevant to human movement, in sport and exercise settings
2. interpret the fundamental mechanics of musculoskeletal injury and soft tissue adaptation
3. Identify the anatomical differences and functions of bone, muscle, ligament and tendon

### TEACHING METHODS

The module will be taught using a combination of weekly Two-hour formal lectures, student-driven seminars and workshops. Supplementary materials will be delivered using the on - line Blackboard software.

The benefits of attendance at lectures and participation in seminars and workshops cannot be overstated. There is a very high correlation between attendance and participation, and successful completion. Students are strongly advised to ensure that their attendance is at the required minimum of 80%. Failure to do this may lead to being withdrawn from the module or examinations. It is recognised that a student may be absent from a lecture or seminar for valid reasons. In such circumstances, the Module Tutor/year tutor should be informed.

In addition to the formal lectures and seminar sessions, students are expected to engage in personal (and group) studies. Attendance at lectures and participation in seminar sessions is not sufficient as a learning strategy. "Active" personal study is an important part of the module and will enhance the formal studies that take place in lectures and seminar sessions.

## **ASSESSMENT METHODS**

This module is assessed through a Portfolio (40%) and a case study presentation (60%).