



## **PARTNERS ACADEMIC SUMMER SCHOOL 2025**

### **Syllabus for Sport & Exercise Science**

#### **Subject Area**

This syllabus is for PARTNERS applicants seeking to progress to the degrees of:

BSc Hons Sport and Exercise Science

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#### **Aims**

To allow students to demonstrate their potential to succeed in specified degree programmes by showing a grasp of entry-level subject-specific knowledge, understanding, cognitive and subject-specific skills.

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#### **Learning Outcomes**

A good knowledge and understanding of ...

- The role of a sport scientist in life.
- The importance of psychology, physiology, metabolism, nutrition and biomechanics in relating to sport and exercise science.
- Performance Profiling techniques and how it ties into psychological and physiological skills training programmes.
- The roles of nature and nurture in sports performance.
- What body composition is, how to assess it, and why it is important for performance and health.
- How to assess the different components of exercise capacity and why they are important for performance and health.
- The roles of different energy systems to provide the human body with energy to exercise.
- The role of food in providing the human body with substrates to derive energy from.
- Kinematics and kinetics concepts of movement and forces and the way muscles interact with the skeleton and how this is linked to injury prevention and rehabilitation.

The ability to apply this knowledge and critical understanding to...

- Translate by conducting practical work.

- Communicate by completing written exercises (workbook formative assessment) around the relevance of sport and exercise science in relation to both athletic performance and general health.

Competence in...

- Self-reflection and self-evaluation of psychological and physiological components in sport and exercise.
  - Developing exercise performance task and injury prevention.
  - Accurately measuring basic body composition and exercise capacity and comparing to normative data.
  - Collecting experimental data.
  - Creating a figure in Microsoft Excel.
  - Using software to analyse dietary intake and biomechanical movement
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## **Summer School Syllabus**

### **Mon 30th June (Online)**

- Sport and Exercise Science at Newcastle University
- Sport Psychology
- Physiology and Performance Profiling

### **Tuesday 1<sup>st</sup> July (Online)**

- Body Composition and Fitness Testing
- Energy Systems in the Human Body

### **Thursday 3<sup>rd</sup> July (in-person)**

- Practical Physiology and Performance Profiling
- Nutrition to fuel the human body

### **Friday 4<sup>th</sup> July (in-person)**

- Practical Energy Systems, Body composition
  - Biomechanics in injury prevention and rehabilitation
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## **Activities for Personal Study**

More information about these will be provided by your strand leader during the summer school.

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## **On-Campus Teaching:**

Wednesday 2<sup>nd</sup> July (PM), Thursday 3<sup>rd</sup> July, Friday 4<sup>th</sup> July

**Online Teaching:**

Monday 30<sup>th</sup> June, Tuesday 1<sup>st</sup> July

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**Formative Assessment Details**

Workbook, containing a total of 6 exercises linked to each taught topic. Students are required to complete and submit all 6 exercises.

More details will be given during the event by your Academic Strand Lead.

**Hand-in Method**

Digital

**Assessment deadline**

Friday 11<sup>th</sup> July