PARTNERS ACADEMIC SUMMER SCHOOL 2024
Syllabus for Sport and Exercise Science

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

- BSc (Hons) Sport and Exercise Science

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.

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 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 and executing 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.

Summer School Syllabus

Monday (online)

• Sport and Exercise Science at Newcastle University

• Sport psychology

• Physiology and Performance Profiling

Tuesday (online)

• Body Composition and Fitness Testing

• Energy Systems in the Human Body

Thursday (in-person)

• Practical Physiology and Performance Profiling

• Nutrition to fuel the human body

Friday (in-person)

• Practical Energy systems, Body Composition

• Biomechanics or S&C

Activities for Personal Study

Recommended reading for taught sessions will be accessible on Canvas. Complete formative assessment by working through a provided workbook document.

Online Teaching:

Monday 1st , Tuesday 2nd July

On-Campus Teaching:

Wednesday 3rd (PM), Thursday 4th & Friday 5th July

Formative Assessment Details

Throughout the sessions, academic staff will set several tasks for students to complete.
These tasks are prepared in a workbook. Students will have to complete all the tasks in the workbook and submit this workbook (.docx) via Canvas as their formative assessment.

Hand-in Method

Digital

Assessment deadline

Friday 12th July