# F21EA Sports Data Engineering and Analysis

## COURSE DETAILS

**Course Code:** F21EA  
**Full Course Title:** Sports Data Engineering and Analysis  
**SCQF Level:** 11  
**SCAF Credits:** 30  
**Available as Elective:** No

## DELIVERY LEVEL

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<th>Undergraduate</th>
<th>Postgraduate Taught</th>
<th>Postgraduate Research</th>
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**Additional Information:**

## COURSE AIMS

The course aims to give students the opportunity to develop

- An extensive, detailed and critical knowledge of theories and principles behind performance measurement in sport
- Critically analyse a range of performant sport data sets applying data science techniques
- A range of specialised skills and methods involved with working with sports data

## LEARNING OUTCOMES – SUBJECT MASTERY

- Identify and apply appropriate data science techniques to analyse and interpret specific sports data sets.
- A detailed and integrated knowledge and understanding of a range of data science techniques applicable for performant sport data.
- Make informed judgements about appropriate data management and visualisation methodologies for sports data.
LEARNING OUTCOMES – PERSONAL ABILITIES

- Use discipline appropriate software for data analysis, prototyping and learning
- Present, analyse and interpret sports data
- Deal with complex professional and ethical issues including working with human subjects and wider issues relating to sports data
- Exercise autonomy and initiative by planning and managing their own work; develop strategies for independently solving problems and taking the initiative. (PDP)
- Take responsibility for their own and other’s work by contributing effectively and conscientiously to the work of a group, actively maintaining good working relationships with group members, and leading the direction of the group where appropriate. (PDP)
- Reflect on roles and responsibilities by critically reflecting on their own and others’ roles and responsibilities. (PDP)
- Communicate effectively to knowledgeable audiences by preparing formal and informal presentations and written reports.

SYLLABUS

**Syllabus:** Using a team-teaching approach, students will have three taught sessions comprising the presentation of data sets in sport and exercise. Data sets and scenarios will be gleamed from real life examples and require students to work individually and in groups to detail how they might approach the problem. They will have three weeks after each case study to detail their approach to solving the problem and provide a rationale for their decision making before presenting their solution for summative marking. In each four-week case study period there will be one team taught lecture which presents the problem and data set followed by two seminars, one with computer science staff and the other with sport science staff (Oriam).

COURSE RELATIONSHIPS

N/A

LOCATION AND ASSESSMENT METHODS

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