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| <b>Module Title:</b>   | Research in Sport and Health   |
| <b>Language of Instruction:</b>  | English  |
| <b>Credits:</b>  | 5  |
| <b>NFQ Level:</b>  | 6  |
| <b>Module Delivered In</b>   | <a href="#">4 programme(s)</a>   |
| <b>Teaching &amp; Learning Strategies:</b>   | This module will be taught in two theory classes of one hour duration and two computer lab practicals of one hour each for 12 weeks. Teaching will be supported with examples which will be worked through in class. Delivery of the module will involve practical work that the student will complete in class. |
| <b>Module Aim:</b>   | To develop further the students' understanding of research methods, statistical concepts and techniques used in health and sports science.   |
| <b>Learning Outcomes</b>   |  |
| <i>On successful completion of this module the learner should be able to:</i>  |  |
| LO1  | Describe and discuss the research process, especially as it relates to the broad field of health and sports studies, and the advantages and disadvantages of various study designs. Critically evaluate the nature of quantitative and qualitative research and identify appropriate methods of analysis.        |
| LO2  | Identify different types of outcomes and be able to select the appropriate method of analysis for the type of outcome and study design. Explore a range and the implementation of a variety of data collection and data analysis tools.  |
| LO3  | Analyse and interpret a broad range of health, sports and scientific data. Perform and interpret statistical tests using software.   |
| <b>Pre-requisite learning</b>  |  |
| <b>Module Recommendations</b><br><i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>         |  |
| No recommendations listed  |  |
| <b>Incompatible Modules</b><br><i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i> |  |
| No incompatible modules listed   |  |
| <b>Co-requisite Modules</b>  |  |
| No Co-requisite modules listed   |  |
| <b>Requirements</b><br><i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>          |  |
| Successful completion of year 1 or equivalent  |  |

## Module Content & Assessment

### Indicative Content

#### Introduction to research

What is research? Understanding a research question. Types of research: Qualitative and Quantitative, mixed method designs; Introduction to qualitative research and techniques. Defining research variables. Formulation of a hypothesis. Introduction to research design. Understanding different types of study designs and be able to choose the relevant design for a given question.

#### Data analysis and presentation of information

Review of descriptive statistics; Data reduction, organisation and presentation; ; inferential statistics; exploring a data set; statistical significance; correlations; understanding p-values.

#### The normal distribution

Probability distributions. Assessing Normality, parametric and nonparametric methods. Applications of the normal distribution.

#### Analysis of a single sample

Testing hypotheses about a mean based on a single sample, confidence interval for a mean based on the Central Limit Theorem.

#### Analysis of two samples

Testing two means both in the case of paired and unpaired data.

#### ANOVAs

Introduction to ANOVAs. The analysis of variance. Testing the equality of several means.

#### Practical

Review of inputting data and defining variable properties. Perform and interpret statistical tests using statistical software.

### Assessment Breakdown

|                                  | %      |
|----------------------------------|--------|
| Continuous Assessment            | 15.00% |
| Practical                        | 45.00% |
| End of Module Formal Examination | 40.00% |

### Special Regulation

Students must achieve a minimum grade (35%) in both the practical/CA and final examination.

### Continuous Assessment

| Assessment Type | Assessment Description   | Outcome addressed | % of total | Assessment Date |
|-----------------|--|-------------------|------------|-----------------|
| Examination     | Statistics examination. Typically involves a maximum of two assessments which may be in the form of quizzes, assignments and written examinations. | 1,2,3             | 15.00      | n/a             |

No Project

### Practical

| Assessment Type             | Assessment Description | Outcome addressed | % of total | Assessment Date |
|-----------------------------|------------------------|-------------------|------------|-----------------|
| Practical/Skills Evaluation | Practical assessment.  | 2,3               | 45.00      | Sem 1 End       |

### End of Module Formal Examination

| Assessment Type | Assessment Description | Outcome addressed | % of total | Assessment Date |
|-----------------|------------------------|-------------------|------------|-----------------|
| Formal Exam     | Written exam           | 1,2,3             | 40.00      | End-of-Semester |

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

**Module Workload**

| <b>Workload: Full Time</b> |                    |  |
|----------------------------|--------------------|--|
| <i>Workload Type</i>       | <i>Frequency</i>   | <i>Average Weekly Learner Workload</i> |
| Lecture                    | 12 Weeks per Stage | 2.00                                   |
| Practicals                 | 12 Weeks per Stage | 2.00                                   |
| Estimated Learner Hours    | 15 Weeks per Stage | 5.13                                   |
| Total Hours                |                    | 125.00                                 |

**Module Delivered In**

| Programme Code | Programme   | Semester | Delivery  |
|----------------|---|----------|-----------|
| CW_SASPS_B     | <a href="#">Bachelor of Science (Honours) in Sport and Exercise Science</a>                 | 3        | Mandatory |
| CW_SASRA_B     | <a href="#">Bachelor of Science (Honours) in Sports Rehabilitation and Athletic Therapy</a> | 3        | Mandatory |
| CW_SASAC_B     | <a href="#">Bachelor of Science (Honours) in Strength and Conditioning</a>                  | 3        | Mandatory |
| CW_SAPHS_C     | <a href="#">Higher Certificate in Science in Physiology and Health Science</a>              | 3        | Mandatory |