# KentVision Code and title of the module

# SACO7001 Research Skills and Advanced Analytical Methods

# Division and School/Department or partner institution responsible for the module

School of Anthropology and Conservation, Division of Human and Social Sciences

# The level of the module

Level 7

# The number of credits and the ECTS value which the module represents

20 credits (10 ECTS)

# Which term(s) the module is to be taught in (or other teaching pattern)

Autumn or Spring

# Delivery of the module

* 1. **Mode of study**

In person

* 1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

# Prerequisite and co-requisite modules and/or any module restrictions

None.

# The course(s) of study to which the module contributes

* 1. **The module is compulsory for the following courses**

MSc Forensic Osteology and Field Recovery Methods

MSc Conservation Scienceand cognate pathways

* 1. **The module is optional for the following courses**

MSc Ethnobotany

 **8.3 Also available as an elective module.**

# A synopsis of the curriculum

This module will introduce students to research and survey design, and hypothesis testing, drawing upon different scientific approaches. The principles of experimental design and how these can be applied to field projects will be explained, together with the nature of both quantitative and qualitative data. An introduction to sampling strategies and the role of probability in inferential statistics will lead into the role of descriptive statistics and measures of variability in data exploration. This will be complemented by consideration of the application of both parametric and nonparametric statistics in data analysis (t-tests, ANOVA, regression, correlation, their nonparametric equivalents), including multivariate tests. The rules underlying the appropriate presentation of statistical data in research reports will be discussed**.** Upon completion students will understand the principle quantitative analytical approaches to research, and the best ways of presenting results.

# Contact Hours

Private Study: 175

Contact Hours: 25

Total Hours: 200

# Learning and teaching methods

Lectures, seminars and computer practicals.

# The intended subject specific learning outcomes

On successfully completing the module students will be able to:

12.1 demonstrate a sound knowledge of the principles of research and survey design

12.2 construct a research project with testable hypotheses

12.3 demonstrate a comprehension of the difference between quantitative and qualitative data

12.4 critically evaluate methodologies and results

12.5 be able to align inferential statistical tests with different types of variables and different research designs

12.4 analyse quantitative data with univariate and multivariate inferential statistical tests using appropriate software (SPSS or R).

12.5 present results suitable for a scientific report

# The intended generic learning outcomes

On successfully completing the module students will be able to:

13.1 critically evaluate and problem solve.

13.2 independently learn and time manage.

13.3 demonstrate enhanced computer literacy using statistical software

13.4 demonstrate critical skills and communication by appropriate methods

# Assessment Strategy

* 1. **Main assessment methods**

\*Critical Reading (50%): the students are tasked to write a critical response to one of two scientific articles issued by the module convenor in the form of a ‘Letter to the Editor’. This critical piece should not exceed 800 words (excluding references)

\*Statistical Analysis (50%). This assignment consists of statistical exercises with a series of tasks with clear instructions based on given datasets.

**\*Both elements are pass compulsory and must be passed to achieve the learning outcomes of the module.**

* 1. **How the assessment methods outlined above fit with the course assessment strategy?**

The Critical Reading assignment requires students to assess the style, content and accuracy of a scientific article including the **quantitative statistical methodology and related analyses**. The Statistical Analysis assignment requires students to select and apply quantitative statistical methods to data-sets, and to present their findings in a report-style document. Students gain experience in assessing data to gather information for problem-solving and decision making. Students will also demonstrate computer competency with specialised software and gain an insight into the programming language for SPSS and R.

* 1. **Reassessment methods**

Like for Like

# Mapping of Learning Outcomes

Map of module learning outcomes (sections 12 & 13) to learning and teaching methods (section 11) and methods of assessment (section 14).

* 1. **Module learning outcomes against learning and teaching methods**

| **Module learning outcome** | 12.1 | 12.2 | 12.3 | 12.4 | 12.5 | 13.1 | 13.2 | 13.3 | 13.4 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Private Study** | **X** | **X** | **X** | **X** | ***X*** | **X** | **X** | **X** | **X** |
| *Lectures* | **X** | **X** | **X** | **X** | ***X*** | **X** | **X** | **X** | **X** |
| *Seminars* | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| *Computer Practical(s)* | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |

* 1. **Module learning outcomes against assessment methods**

| **Module learning outcome** | 12.1 | 12.2 | 12.3 | 12.4 | 12.5 | 13.1 | 13.2 | 13.3 | 13.4 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Critical Reading* | **X** | **X** |  |  |  | **X** | **X** |  | **X** |
| *Statistical analysis* |  | **X** | **X** | **X** | **X** |  | **X** | **X** | **X** |

# Reading list

The University is committed to ensuring that core reading materials are in accessible electronic format in line with the Kent Inclusive Practices.

The most up to date reading list for each module can be found on the university's [reading list pages](https://kent.rl.talis.com/index.html).

# Inclusive module design

The Division recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

**MODULE RECORD**

**All revisions for this module are recorded in the table below for student and staff information.**

| **Date approved** | **New/ Material/ Major/ Minor revision** | **Start date of delivery of this version** | **Applies to new cohorts and/ or existing students (for revised modules)** | **Sections revised (if applicable)** |
| --- | --- | --- | --- | --- |
| 22.09.23 | New | Sept 24 | New | n/a |
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