



MODULE SPECIFICATION

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| Academic Year (student cohort covered by specification) | 2023-24 |
| Module Code | 2031 |
| Module Title | Introduction to Statistical Computing |
| Module Organiser(s) | Antonio Gasparri and Manuela Quaresma |
| Faculty | Epidemiology & Population Health |
| FHEQ Level | Level 7 |
| Credit Value | CATS: 10 ECTS: 5 |
| HECoS Code | 100956 : 100755 |
| Term of Delivery | Term 1 |
| Mode of Delivery | For 2023-24 this module will be delivered using pre-recorded lectures and in campus face-to-face practical and Q&As sessions. |
| Mode of Study | Full-time |
| Language of Study | English |
| Pre-Requisites | None |
| Accreditation by Professional Statutory and Regulatory Body | Not currently accredited by any other body |
| Module Cap (indicative number of students) | 40 (numbers may be capped due to limitations in facilities or staffing) |
| Target Audience | This module is compulsory for the MSc Medical Statistics. |
| Module Description | An introduction to the statistical packages Stata and R. |
| Duration | 5 weeks at 1.5 to 2 days per week (plus one session in orientation week) |
| Timetabling slot | Term 1 |
| Last Revised (e.g. year changes approved) | July 2023 |

| Programme(s) | Status |
|---|---------------|
| This module is linked to the following programme(s) | |
| MSc Medical Statistics | Compulsory |



Module Aim and Intended Learning Outcomes

Overall aim of the module

The overall module aim is to:

- Introduce students to the statistical packages Stata and R.

Module Intended Learning Outcomes

Upon successful completion of the module, for each of Stata and R, a student will:

1. Be familiar with the working environments
2. Be able to assess the strengths and limitations
3. Be able to create, manage and manipulate data/datasets
4. Be able to effectively communicate results in tables and figures
5. Understand good practice for managing data and statistical analysis
6. Be able to solve problems using use the help facilities
7. Be able to construct problem specific programs

Indicative Syllabus

Session Content

The module is expected to cover the following topics:

- An introduction to the statistical package Stata
- An introduction to the statistical package R

Teaching and Learning

Notional Learning Hours

| Type of Learning Time | Number of Hours | Expressed as Percentage (%) |
|---------------------------------|-----------------|-----------------------------|
| Contact time | 25.5 | 25.5 |
| Directed self-study | 57.5 | 57.5 |
| Self-directed learning | 17 | 17 |
| Assessment, review and revision | 0 | 0 |
| Total | 100 | 100 |

Student contact time refers to the tutor-mediated time allocated to teaching, provision of guidance and feedback to students. This time includes activities that take place in face-to-face contexts such as lectures, seminars, demonstrations, tutorials, supervised laboratory workshops, practical classes, project supervision as well as where tutors are available for one-to-one discussions and interaction by email.

The division of notional learning hours listed above is indicative and is designed to inform students as to the relative split between interactive and self-directed study.

Teaching and Learning Strategy

Each session will consist of a series of short presentations followed by supervised computer work. The computer work will involve material that the students can work through at their own pace during each session followed by exercises.

Assessment

Assessment Strategy

The content of this module is assessed through Paper 1.

Summative Assessment

| Assessment Type | Assessment Length (i.e. Word Count, Length of presentation in minutes) | Weighting (%) | Intended Module Learning Outcomes Tested |
|---------------------|--|---------------|--|
| Exam (Papers 1 & 2) | Various | 100% | 1-7 |

Resitting assessment

Resits will accord with the LSHTM's [Resits Policy](#)

Resources

Indicative reading list

A recommended reading list is provided with the module course notes for Stata and R.

Other resources

Example datasets, used for each module, will be made available electronically.



Teaching for Disabilities and Learning Differences

Students are provided with access to module information, lecture notes, practical exercise notes with solutions, datasets, Stata and R scripts via Moodle. The module also provides additional support for students with disabilities and learning differences in accordance with the Student Support Services section of the Student Handbook. Reasonable adjustments and support can be arranged, such as rest breaks, or any other necessary provisions discussed and agreed with the Student Advisor.

The module-specific site on Moodle provides students with access to lecture notes and copies of the slides used during the lecture prior to the lecture (in pdf format). All lectures are recorded and made available on Moodle as quickly as possible. All materials posted up on Moodle areas, including computer-based sessions, have been made accessible where possible.

The LSHTM Moodle has been made accessible to the widest possible audience, using a VLE that allows for up to 300% zoom, permits navigation via keyboard and use of speech recognition software, and that allows listening through a screen reader. All students have access to "SensusAccess" software which allows conversion of files into alternative formats.

For students who require learning or assessment adjustments and support this can be arranged through the Student Support Services – details and how to request support can be found on the [LSHTM Disability Support pages](#).