STAT6093 Survey sampling

Module Outline 2018/2019

Semester 1

Contents

This module outline should be read in conjunction with the Blackboard website for the module and the Degree Handbook for your degree programme. Degree Handbooks are available here: https://www.southampton.ac.uk/studentservices/academic-life/faculty-handbooks.page

1. **Essential information**

Staff:

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Times and Dates:

The module will take place between Monday 26th November and
Thursday 29th November 2018.

Assignments and Assessments

100% exam

2. **Course content**

a) **Aims of the Module**

The aim of this module is to introduce you to the statistical aspects associated with the design and analysis of sample surveys, and to develop your understanding of the principles and methods used to design survey sampling schemes. Basic theory underpinning survey inference will be introduced, focussing on methodology for survey-based estimation for population totals and related quantities for some standard sample designs.

b) **Learning Outcomes**

By the end of this module, you should be able to:

- the basic principles underlying survey design and estimation;

- methods for designing and selecting a sample from a population;

- how to estimate finite population parameters, e.g. totals and means, for some standard sampling schemes;

- how to assess estimation errors.

c) Key Skills

By the end of this module you will have developed the following skills:

- the ability to analyse and solve problems related to sample selection and estimation;

- use of the statistical software Stata.

d) Recommended Reading

Lohr, S. (2010). Sampling: Design and Analysis (2nd edition). Duxbury Press. [HA 33 LOH, 1 copy + 2 copies of earlier edition].

Sarndal, C.E., Swensson, B. and Wretman, J.W. (1992). Model Assisted Survey Sampling. New York: Springer-Verlag. [QA 276.5 SAR, 2 copies].

Cochran, W.G. (1977). Sampling Techniques (3rd edition). New York: Wiley. [HA 33 COC, 4 copies].

e) Blackboard

When registered for the module, you should be enrolled automatically on the module's Blackboard course and you can log on at: http://blackboard.soton.ac.uk/. If you do not have access to the site please let the module coordinator know.

The site contains all the relevant course materials. Hard copies of the slides and handouts for computer workshops will also be provided.

You should check in regularly to ensure you see all announcements and course materials. You will also need to submit your coursework to Turnitin through Blackboard (see section 3d below).

f) **Provisional timetable**

Monday 26th November

10:00 – 11:20 Introduction / Lecture

11:20 – 11:30 Coffee break

11:30 – 13:00 Lecture

13:00 – 14:00 Lunch

14:00 – 15:30 Lecture

15:30 – 15:40 Coffee break

15:40 – 17:30 Lecture / Exercises

Tuesday 27th November

09:00 – 10:30 Lecture

10:30 – 10:45 Coffee break

10:45 – 12:30   Lecture

12:30 – 13:30 Lunch

13:30 – 15:00 Lecture

15:00 – 15:15 Coffee break

15:15 – 17:30 Lecture / Exercises

Wednesday 28th November

09:00 – 10:30 Lecture

10:30 – 10:45 Coffee break

10:45 – 12:30   Lecture

12:30 – 13:30 Lunch

13:30 – 15:00 Lecture

15:00 – 15:15 Coffee break

15:15 – 17:30 Lecture / Exercises

Thursday 29th November

09:00 – 10:30 Lecture

10:30 – 10:45 Coffee break

10:45 – 12:30   Lecture / Questions & answers

12:30 – 13:30 Lunch

13:30 – 15:00 Computer Workshop

15:00 – 15:15 Coffee break

15:15 – 17:30 Computer Workshop

This timetable is subject to change depending on class progress. The lecturer will be around during Friday afternoon if you have any queries about any of the module material.

3. Assessment and Feedback

a) Assessment methods

There will be a 2 hour examination. The examination paper will cover all topics, and will be worth 100% of the overall mark for the module.

b) Resit arrangements

If you find yourself in the unfortunate position of having to resit, then you will have to resit another examination in the supplementary exam period.

c) Past exam papers

The university has a repository of past exam papers for students to consult, which can be accessed here: https://www.adminservices.soton.ac.uk/adminweb/jsp/pastPapers/pastPapers.jsp?

e) Feedback

Formative and summative feedback are provided in the following ways:

- Informal verbal feedback will be given during lectures and tutorials for individual and group work. (You'll need to contribute regularly to group discussions to make the best use of this.)
- Informal written and verbal feedback are often provided by email or during office hours when we respond to queries about assessments, for example.
- Exam results are published only as a grade. Although individual feedback on examinations is not normally given, feedback on the strengths and weaknesses of the performance of the whole group which took an examination may be available via Blackboard.
- Students are entitled to view their examination scripts on request, your Student Office can advise on the process to be followed. You are only permitted to view an examination script to enable you to see how you can improve your future performance and no mark or other annotation on the script is negotiable or open to alteration. The absence of annotation on a script does not mean that it has not been marked.
- Feedback works two ways – we want to hear from you about any concerns you have and suggestions about how to improve modules. We do this through informal mid semester feedback, which can sometimes be used to

make immediate improvements in module delivery, and through a formal questionnaire at the end of the module, which will benefit students taking it in subsequent years. In addition to these, informal feedback from you on how we are doing and what we could do better is welcome anytime.

- For further information about how your work is marked and moderated, university quality assurance processes etc., please visit the marking and feedback section in the University's quality handbook: https://www.southampton.ac.uk/quality/assessment/framework/marking_ and_feedback.page?

For the feedback to be effective, it is important that you work with the feedback given and identify how you can improve your work in the future. Should you need further information about your work, get in touch with whoever marked the work.

4. **Grade Descriptors and Marking Criteria**

Social Statistics and Demography follow the standard the University grade descriptors available here: http://www.southampton.ac.uk/quality/assessment/framework/principles_an d_definitions.page#assessment_descriptors when marking assessed work. The marking criteria and/or marking rubric for each individual piece of assessment on this module will be made available on Blackboard and with the instructions for each assessment. Note that the rating given for each criterion is descriptive and does not necessarily relate in a direct numerical way to the mark achieved.

5. **Academic Integrity and Referencing**

The University places the highest importance on the maintenance of academic integrity and expects that all students will familiarise themselves with the Regulations Governing Academic Integrity available at: http://www.calendar.soton.ac.uk/sectionIV/academic-integrity-regs.html

Procedures will be invoked to investigate suspected breaches of academic integrity when concerns are raised during the marking process or in connection with suspected cheating in examinations. We are aware that students may have experienced differing standards at other institutions (including those overseas) but it is essential that you take steps to ensure your full understanding of the standards expected at Southampton as significant penalties can be imposed if these standards are breached.

It is often helpful to discuss ideas and approaches to your work with your peers, and this is a good way to help you think through your own views. However, work submitted for assessment should always be entirely your own, except where clearly specified otherwise in the instructions for the

assignment. In some instances working in groups will be required, and there may be occasions when work is submitted from the whole group rather than individuals. In these instances the instructions will make it clear how individual contributions to the joint work should be identified and will be assessed. If you are in any doubt, check with the person setting the assignment. If you have worked with others you should make sure that you acknowledge this in any declaration you make.

Please note that you are NOT permitted to discuss the assignment or to show any other student your written work or computer programmes or outputs. Copying includes using another student's computer program, output or graphics.

A very useful set of interactive guides is available at http://library.soton.ac.uk/sash/what-is-academic-integrity. These aim to help you gain a better understanding of academic integrity and develop your skills so that your assessed work does not accidentally plagiarise the work of others.

Referencing

There are many styles of referencing used in academic publications. Unless otherwise specified the style known as the Harvard system is preferred in our Faculty. Details about how to use the Harvard referencing system can be found through the following Hartley library link: http://library.soton.ac.uk/sash/referencing or by downloading the guide from: http://library.soton.ac.uk/ld.php?content_id=4660789.

If in doubt about what is required in any particular assignment, what referencing styles are appropriate etc., always ask. Your tutor or module co-ordinator will be able to point you in the direction of appropriate sources of advice and information.

Unfortunately, Academic integrity breaches sometimes occur. The regulations distinguish between two types of breaches of academic integrity: minor (first-time offences, "committed through inexperience or lack of understanding and ... limited in scope or their effect"), and major. The minor breaches are dealt with by individual markers, through the regular feedback process. However, everything that is not a minor breach, including all repeated cases, is a major one.

The major breaches are dealt with either by the Faculty Academic Integrity Officer or by an Academic Integrity panel, depending on the severity of the alleged breach. The outcomes from this process can vary with the maximum penalty that can be given the termination of the programme – **so please treat Academic Integrity seriously**.

6. **Support and Troubleshooting**

If you find yourself experiencing any study skills difficulties contact the Academic Skills Hub, level 2 in the Hartley Library, Monday - Friday: 10:00 – 12:00 & 14:00 – 16:00. http://library.soton.ac.uk/sash

You can also access specialized study support from Enabling Services: https://www.southampton.ac.uk/edusupport/study_support/index.pageIf you experience any specific difficulties with the content of the module, please contact the module coordinator.

If you are not satisfied with the response contact your Personal Academic Tutor or the Programme Coordinator.

If you have a major difficulty during the course, such as a health problem that prevents you from attending lectures or seriously interferes with your work, you should make sure to discuss this with your Personal Academic Tutor.