

Survey Design and Analysis – 6547

Survey Design and Analysis Outline 2009

Faculty of Information Sciences and Engineering

University of Canberra

Australian Government Higher Education (CRICOS)
Registered Provider number: #00212K

This Unit Outline must be read in conjunction with:

- a) *Studying at the University of Canberra: A Guide to Policies and Procedures*, which sets out University-wide policies and procedures, including information on matters such as plagiarism, grade descriptors, moderation, feedback and deferred exams, and is available at <http://www.canberra.edu.au/student-services>
- b) *Guide to Student Services at the University of Canberra*, and is available at <http://www.canberra.edu.au/student-services>
- c) Any additional information specified in section 6f.

1: General Information

1a Unit title: Survey Design and Analysis

1b Unit number: 6547

1c Semester and year offered: Semester 1, 2009

1d Credit point value: 3

1e Unit level: UG level 3

1f Name of Unit Convenor and contact details
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Name of Unit Moderator and contact details
Alice Richardson, Room 11C21 ph: 6201 2444
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1g Administrative contact details
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2: Academic Content

2a Unit description and learning outcomes

Syllabus

This unit deals with the design of surveys of the type often carried out by governments and private organizations, dealing with such topics as methods of sampling and questionnaire design. Some consideration is given to techniques of analysis but the emphasis is on design.

Learning Outcomes

A student will be expected to be able to determine the information that is required to produce an efficient design for a statistical survey; construct an efficient design for a statistical survey in such a way that an independent investigator would be clear about the procedure to be followed; and design a questionnaire which is satisfactory for the intended purpose.

Graduate Attributes

This unit primarily addresses the UC graduate attributes on Information Literacy and Numeracy, Information and Communication Technology and Problem Solving which are stated in the following terms....

Graduates are expected to be able to:

1. identify, collate, analyse, manipulate, evaluate, interpret and present information and numerical data.
2. select and use appropriate information and communication technology to retrieve, manipulate and present information.
3. identify problems and analyse the main features of problems relevant to their professional field;
4. apply appropriate problem solving processes, arguments, critical and creative thinking;
5. implement and evaluate strategies for the resolution of problems.

2b Prerequisites and/or co-requisites

Introduction to Statistics, or Business Statistics, or a similar approved unit.

3: Delivery of Unit and Timetable

3a Delivery mode

The delivery of the unit is in traditional mode, that is on campus in standard semesters with weekly lectures, tutorials and practicals (some of which are in the computer laboratory) throughout the semester.

Schedules for lectures, tutorials and practicals

Day	Activity	Type	Start	End	Duration	Weeks	Room
Monday	LA/01	Lecture	12:30	14:30	2:00	1-2, 4-7, 11-15	11C43
Thursday	LB/01	Lecture	10:30	11:30	1:00	1-7, 10-15	9B13
Thursday	C/01	Computer Laboratory	11:30	12:30	1:00	2-7, 10-15	11A46

3b Schedule of topics by week

Week	Topic
1	ELEMENTS OF THE SAMPLING PROBLEM
2	SOME BASIC CONCEPTS OF STATISTICS
3	SIMPLE RANDOM SAMPLING
4	STRATIFIED RANDOM SAMPLING
5	STRATIFIED RANDOM SAMPLING continued
6	RATIO, REGRESSION, AND DIFFERENCE ESTIMATION
7	RATIO, REGRESSION, AND DIFFERENCE ESTIMATION continued. Mid semester test.
8, 9	CLASS FREE PERIOD
10	SYSTEMATIC SAMPLING.
11	CLUSTER SAMPLING
12	CLUSTER SAMPLING continued
13	ESTIMATING THE POPULATION SIZE
14	COMPARISONS: THE DESIGNS & METHODS
15	REVISION
June	EXAMINATION SESSION

4: Unit Resources

4a List of required texts

You should have access to a copy of

- (a) R.L. Scheaffer, W. Mendenhall III, R.L. Ott (2006) *Elementary Survey Sampling*, Southbank, Vic.; Belmont, CA: Thomson Brooks/Cole.

The textbook is available in the University Bookshop. The book is also available in the University Library.

Supplementary reading

(a) P.S. Lemeshow and S. Levy (2008) *Sampling of Populations*, Wiley.

4b Materials and equipment

Pen/pencil, paper, scientific calculator, access to building 11 PC laboratories.

4c Unit website

The unit website can be reached through Moodle. Copies of some notes or handouts to be used in the lectures may be posted to the unit website. There will be a number of handouts distributed in the lectures throughout the semester.

5: Assessment

5a Assessment overview

Assessment will be based on a combination of three continuous assessment marks and an end-of-semester examination mark.

Assessment Item	Due Date of Assessment items	Weighting (to equal 100%)
Assignment 1	Tut/Lab in week 4	15%
Mid semester test	Tut/Lab in week 7	20%
Assignment 2	Tut/Lab in week 13	15%
End-of-semester Examination	Examination Period (three hours)	50%

5b Details of each assessment item

Assignment 1

It may be done in pairs. It covers weeks 1-3 and students will use a computer package or calculator to perform statistical analyses.

Mid semester test

It will take place in the PC lab in building 11. It covers weeks 1-5 and students will use a computer package or calculator to perform statistical analyses. Permitted materials are pens, rulers, calculators, handouts and unlimited notes. Statistical tables will be supplied. No textbooks are allowed (hard copy or electronic).

Assignment 2

It may be done in pairs. It covers weeks 5-11 and students will use a computer package or calculator to perform statistical analyses.

End-of-semester Practical Examination

The three-hour **end-of-semester exam** will be held during the University examination period. This exam covers the whole semester, and students will either

- (1) use a computer package to perform statistical analyses or
- (2) interpret computer output provided and use a calculator to perform statistical analyses.

Permitted materials are pens, rulers, calculators, lecture handouts (may be annotated) and **four sides of your A4** notes. Statistical tables will be supplied. No textbooks are allowed (hard copy or electronic).

5c Special assessment requirements

Grades: If you achieve a satisfactory continuous assessment mark and a satisfactory end-of-semester exam mark, your grade for the unit will then be determined as follows. Each student will receive a *unit mark* which is a mark out of 100 calculated using the weightings shown in **5a**. This mark will be scaled to a *numerical grade*. *Grades* will be distributed according to the table below.

Grade	Numerical Grade Equivalent
HD	85 and above
DI	75 - 84
CR	65 - 74
P	50 - 64
Fail	0 - 49

In the case of illness, misadventure or unavoidable commitments students should contact the unit convenor as soon as possible. Students should consult the web page <https://guard.canberra.edu.au/policy/Academic/Assessment> for details on the Academic Board's Special Consideration policy and the procedures by which a student may seek a deferred examination.

5d Supplementary assessment

To be eligible to undertake supplementary assessment in a unit, a student must:

- Be enrolled in their final semester of study;
- Have failed a single unit, with a final mark between 45-49% in the unit;
- Have passed all other units undertaken in that semester.

The failed unit must be the final unit require to complete the academic requirements of the course.

5e Text-matching software

This is not relevant to this unit.

6: Student Responsibility

6a Workload

The amount of time you will need to spend on study in this Unit will depend on a number of factors including your prior knowledge, learning skill level and learning style. Nevertheless, in planning your time commitments you should note that for a 3cp Unit the total notional workload over the fifteen week semester is assumed to be 150 hours or an average of 10 hours per week. These hours include time spent in classes. The total workload for Units of different credit point value should vary proportionally. For example, for a 6cp Unit the total notional

workload over a fifteen week semester is assumed to be 300 hours or an average of 20 hours per week.

6b Special needs

Students who need assistance in undertaking the unit because of disability or other circumstances should inform their Unit Convener or the Disabilities Office as soon as possible so the necessary arrangements can be made.

6c Attendance requirements

It is strongly advised that students should attend all the lectures and tutorials.

6d Required IT skills

It is assumed that students have some familiarity with the use of a computer and Excel.

6e Costs

The textbook, a calculator and possibly some printing costs.

6f Additional information

Any announcements made at lectures will also be shown on the **unit** web page. These announcements are deemed to be known by all students within two days of being posted to the web page.

7: Student Feedback

All students enrolled in this Unit will have an opportunity to provide anonymous feedback on the Unit at the end of the Semester via the Unit Satisfaction Survey which will be presented to you on OSIS. Your lecturer or tutor may also invite you to provide more detailed feedback on their teaching through an anonymous in-class questionnaire administered through the University's Teaching and Learning Centre (TLC).

8: Authority of this Unit Outline
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Any change to the information contained in Section 2 (Academic content), Section 3 (Delivery of Unit and timetable) and Section 5 (Assessment) of this document, will only be made by the Unit Convener if the written agreement of staff and a majority of students has been obtained; and if written advice of the change is then forwarded to each student enrolled in the Unit at their registered term address. Any individual student who believes him/herself to be disadvantaged by a change is encouraged to discuss the matter with the Unit Convener.