



Institute of Transport and Logistics Studies

144 Burren Street, Newtown, Sydney

Directions and map: <http://sydney.edu.au/business/itls/about/directions>

Note: ITLS is not on the main campus

Please see the ITLS website for other important details about units at ITLS:

http://sydney.edu.au/business/itls/courses/transport_and_logistics

ITLS student enquiries office:

Email: business.itlsinfo@sydney.edu.au

Office: Room 312B, Level 3, ITLS, 144 Burren Street, Newtown

Assessment collection / viewing: Monday to Friday 12pm to 1.30pm ONLY

Timetable:

Please note that the timetable provided in this outline is subject to change. You should check your timetable on MyUni for final dates and to see which group you have been assigned to, see: <http://myuni.usyd.edu.au/>

TPTM6425

Collecting, Managing and Assessing Data
Semester One 2011

Unit of study outline

Unit Coordinator: Professor Peter Stopher

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Office: ITLS Building, Level 2, Room 202A

Consultation times: By appointment.

Please use email as your first method of communication.

Classes

Class times: 8:30 a.m. to 4:30 p.m.

Venue: LT2, Level 2, ITLS Building, 144 Burren Street, Newtown

Class	1	2	3	4	5	6
Day	Monday	Monday	Monday	Monday	Monday	Monday
Date	07 March 2011	21 March	04 April	18 April	16 May	30 May

See Section 7 for more information about each class and other important dates.

1. Unit of study information

1.1. School handbook description

This unit introduces students to the concepts of designing and implementing data collection procedures, particularly through surveys of human populations. The unit introduces simple sample designs, and covers the design of data-collection instruments, protocols for undertaking surveys of human populations, pilot surveys and pre-tests, survey ethics, survey administration, coding and archiving of data, computation of sampling errors and population statistics, response rates and other measures of survey quality, and validation of survey data. The unit also includes discussion of applications of advanced technology to surveys, such as Internet surveys, surveys using GPS devices, and other remote sensing techniques. The unit is of particular value to students majoring in transport, logistics, marketing and urban planning.

1.2. Pre-requisite units

There are no pre-requisite units for TPTM6425. However, TPTM6495 Analysis Tools for Transport and Logistics is a co-requisite unit.

1.3. Assumed knowledge and/or skills

You are assumed to be familiar with Excel and be able to use it for calculating various statistics and measures. You are also assumed to know some basic statistics, the extent of which is reviewed in the first class meeting.

1.4. Workload requirement

It is expected that you will spend approximately 150 hours on this unit (including preparing for and attending classes) and produce approximately 9,000 words or equivalent of work. This time should be made up of reading research, working on exercises and problems and participating in classes. In periods where you need to complete assignments or prepare for examinations, the required workload may be greater.

2. Learning aims and outcomes

2.1. Aims of the unit

This unit aims to provide students with skills in laying out and designing surveys for human populations, deciding on what questions should be asked, how to ask questions, and how to increase voluntary response through appropriate design. The unit also introduces the idea of sampling error and provides students with the statistical knowledge to be able to estimate sampling errors, sample sizes, etc. Expansion of data, response rates, and various measures of survey quality are also discussed. Students who complete this unit satisfactorily should be able to design a survey of a human population from the initial steps of deciding on the method of survey administration, the processes for surveying, and the questions to be asked, through to the fielding of the survey, coding of data, validation of survey results, and archiving of data.

2.2. Learning outcomes

The learning outcomes are:

1. Develop skills that will allow students to be effective designers of surveys, especially of human populations, assess the quality of a survey, estimate sampling error, costs of different survey mechanisms, expansion factors, and weighting factors.
2. Apply statistical theories and concepts to problems in survey design and management. Develop coherent arguments when recommending solutions and crucially evaluating survey designs and data.
3. Be able to communicate the concepts learnt in this unit effectively in verbal and written contexts to a professional standard.
4. Develop skills in design of survey instruments, survey procedures, sample designs, strategies to deal with non-response, standards of good survey design and management, and calculation of sampling errors and required sample sizes.
5. Be able to tackle topics in survey design and management beyond this unit, in diverse and unpredictable situations, by applying the concepts and ideas learnt and assessed within this unit.

2.3. Links between learning outcomes and learning and teaching methods

There will be six lectures throughout the semester which will provide students with the basic learning tools for this unit of study. These will cover the key theories, concepts, and design principles for surveys of human populations and will involve discussion and participation by students. Throughout the semester, students will be expected to work individually to apply this knowledge to solving problems in survey design. This will be accomplished by completing three quantitative homework assignments dealing with various calculations involved in designing and analysing survey data, designing a survey form for a specific survey to be specified, participating in pop quizzes during class, and preparing for and undertaking a viva on a specific issue that will be assigned to each student.

2.4. Links between learning outcomes and assessment

Through three quantitative homework assignments, worth 45% of the mark together, students will understand and apply the ideas of others to specific survey issues, present clear, concise, and coherent responses to the assignments, clearly communicate the approach taken and the methods applied to solve the assigned problems, and learn how to solve quantitative problems through choosing the right approach to solution and applying correct statistical techniques and understand how social and ethical concerns impact survey design. The in-class pop quizzes, worth 5% each, will assist students to rapidly locate the appropriate topic in the notes and apply correct procedures to solve a problem, present clear, concise, and coherent responses under serious time constraints, consulting appropriate sources quickly and effectively, find and solve problems under a specific time limit constraint, learn to respond quickly and without notice to various aspects of the material in the class, and respond confidently to issues relating to ethical, social and personal issues that impact survey design and management. The viva examination, worth 20% of the mark, will assist students to learn how to conduct quality research and focus on a selected topic, evaluate materials from various sources and develop a clear position, present clear, concise, and coherent verbal articulation of ideas and concepts and defend your position in a one-on-one environment, present his/her position in a clear and concise way without visual assists, under a specific time limit constraint, take an original approach to the assignment and develop his/her own way of presenting this, and understand the ethical and social issues that are relevant to his/her assigned problem area. Finally, the survey design exercise, also worth 20% of the mark, will provide each student with the opportunity to research survey designs and related material and develop an effective survey instrument for the assigned task, present his/her work in a professional way, in a form that meets the remit of the assignment, write coherent and well-designed questions and instructions in a survey design, use personal and intellectual autonomy to decide how to design an appropriate survey instrument, and reflect appropriate ethical and social standards in the survey design.

3. Assessment

Assessment items	Relevant unit learning outcome/s	Word length	Weight	Due Date*
1. Homework Assignment	1 and 2	750	10%	28 th March 2011
2. In-class Quizzes (3)	1, 2, 3, and 4	300 each	5% each	TBA
3. Homework Assignment	1, 2, 3, and 4	1,500	15%	18 th April
4. Survey Design	1, 3, 4, and 5	1,500	20%	4 th May
5. Viva	All	1,000	20%	18 th May
6. Homework Assignment	1, 2, 3, and 4	1,250	20%	1 st June 2011
Academic honesty module **		N/A	0%	21 March 2011

* The due date is also the closing date. This means that assessment items will not be accepted after the due date except by prior agreement.

** Students must complete the academic honesty module in Blackboard with a mark above 80%, or an Absent Fail (AF) grade will be given for the entire unit. Students can complete the module multiple times until this grade is achieved. Students who completed the module with a score of 80% or above last semester do not need to do it again.

All assignments, except the Survey Design and the Viva must be submitted electronically via Blackboard. Assignments submitted electronically do NOT require cover sheets. Ensure that your student ID number (SID) is in the top right hand corner of each page for individual assignments. Full information about how to prepare assignments for electronic submission can be found at (http://blackboard.econ.usyd.edu.au/modules/1454_1/Turnitin%20Student%20Guide%20%285.2%29%20280610.pdf).

Should submission problems occur, students should contact Faculty eLearning Support first on 903 66433 or business.elearning@sydney.edu.au or the Unit Coordinator as soon as possible.

The Survey Design product is to be submitted as a hard copy survey form and must be handed in to Professor Stopher on the due date by 12 noon. The submission must include a cover sheet, marking criteria sheet, and the assignment itself.

The Viva is a face-to-face examination that will take place in Professor Stopher's office at times to be determined in the first two weeks of classes. Students must bring two copies of the relevant marking criteria sheet with them to the Viva exam.

3.1. Detailed assessment information

- 1. Homework Assignments:** Each homework assignment poses a number of questions, each of which requires numeric solutions. The homework assignments will require the use of Excel® to estimate the solutions. Students are required to answer all questions in these assignments. Questions of clarification will be answered. However, students are expected to understand the questions themselves and to be able to determine what method should be used to solve the problems. Marking will be based on correctness of method and answer. A wrong answer with the right method will gain a maximum of half of the available points. A correct answer from the wrong method will receive no points. There is no marking criteria sheet for these assignments. Possible marks for each question are provided on the assignment sheets.
- 2. Survey Design:** Specifications will be provided of a survey, for which students are required to develop a design. The design must be developed in either MSWord® or MSPublisher®. Marking will be based on the marking sheet for this assignment which is provided on Blackboard.
- 3. Pop Quizzes:** There will be three pop quizzes, conducted during class time, with no prior warning. Students should come to **each class** prepared to answer a pop quiz covering any material covered in lectures to date, and which may also **require the use of calculators**. As with the homework assignments, marking will be based on correctness of method and answer. A wrong answer with the right method will gain a maximum of half of the available points. A correct answer from the wrong method will receive no points.
- 4. Viva:** For the viva, each student will be assigned a specific task to complete and will then meet with the lecturer for the unit and present his or her response to this task. The presentation must last no more than 15 minutes and this will then be subject to up to 5 minutes of questions about the response to the task. Marking will be based on a marking sheet that is provided on Blackboard. Students must bring **two copies** of this sheet with them to the viva. Appointment times for the viva will be provided before the end of March. Any student who fails to appear at the appointed time will be given a mark of zero for the viva.

3.2. Referencing style and style guide

For this unit the referencing style is the Harvard Referencing Style. Students should download and adhere to the 'How to write a paper at the Institute of Transport and Logistics Studies' report available at http://sydney.edu.au/business/itls/courses/transport_and_logistics/student_resources.

3.3 Feedback on assessment

Timely feedback is intended to help you to improve your learning during the unit. Students will receive feedback during the course of the Semester in the following ways:

- Marks will be posted into the Blackboard Gradebook when all results for an assessment have been compiled. Marks will not be given over the phone. Marks for the pop quizzes, the survey design, and the homework assignments will normally be posted approximately 3 weeks after the assignments are handed in. Marks for the viva will be provided at the conclusion of the viva examination.
- Comments and indications of incorrect approaches and formulae will be provided on the homework assignments. A review of major errors will be undertaken in class following the posting of assignment marks. The third homework assessment will not be reviewed in this way and major comments will be posted to Blackboard.

- If you would like further feedback on the assessment task, you are encouraged to ask during consultation hours. This can be done in pairs or groups if you have similar issues to raise.

3.4. Academic honesty, plagiarism, legitimate cooperation and groupwork

Commencing students should complete the academic honesty module available via Blackboard before their first assessment submission. Students should refer to Faculty and University policies on academic dishonesty and plagiarism

(sydney.edu.au/business/currentstudents/student_information/student_administration_manual), copyright (sydney.edu.au/senate/policies/Intellectual_Property_Rule.pdf) and the 'All your own work website' (sydney.edu.au/student_affairs/plagiarism_index.shtml) for information about legitimate cooperation, group work, how to reference correctly and how to avoid plagiarism.

Academic honesty is important to protect students' right to receive due credit for work submitted for assessment. It is clearly unfair for students to submit work for assessment that dishonestly represents the work of others as their own and gain marks and degrees, which are not based on their own efforts and abilities. Deliberate breaches of academic honesty constitute academic misconduct.

These breaches include: plagiarism, fabrication of data, recycling previously submitted material, engaging someone else to complete an assessment on one's behalf and misconduct during supervised assessments.

The penalties for academic misconduct may include: a mark of zero on the assessment; a fail grade in the unit of study, additional assessment (including an unseen exam), and reference of the matter to the University Registrar.

All assessments will be checked for plagiarism. Where plagiarism is suspected, the assessment will be fully checked and monitored using manual process, Google checks and also electronic plagiarism detectors. In order to do this, the Faculty may reproduce the assessment, provide a copy to another member of faculty, and/or communicate a copy of this assignment to a plagiarism checking service (which may then retain a copy of the assignment on its database for the purpose of future plagiarism checking).

Academic dishonesty involves more than just copying material. Cooperation and helping other students may at times trigger academic dishonesty proceedings if it appears you have worked too closely with another student.

In this unit, all assignments are individual and there are no group assignments. Individual assignments must be written and prepared alone. You may consult with other students about ideas and possible research sources but the analysis and writing of the assignment must be done alone.

4. Texts and other resources

The required textbook for this subject is:

Stopher, P.R. (forthcoming) *Measuring data: The design and management of sample surveys*, Cambridge University Press (available from ITLS at cost)

5. University and Faculty policies and support

5.1. Faculty policies

Faculty policies are contained in the Administration Manual for Students:

sydney.edu.au/business/currentstudents/student_information/student_administration_manual.

It is crucial that you take the time to consult this manual early in your studies in order to familiarise yourself with policies and procedures relating to critical issues such as the Faculty's policy on special consideration (including requirements and timelines. e.g. lodging applications five working days after a missed assessment), appeals (lodge within 15 working days of the decision) and other policies such as enrolment, credit etc. Assistance is available from the Faculty's Student Information Office (sydney.edu.au/business/student_information_office).

5.2. University policies

- **University policies:** sydney.edu.au/policy
- **Assistance** is available from the University's Student Centre: sydney.edu.au/current_students/student_administration
- **The code of conduct** is an important policy which outlines the University's expectations about treating all staff employees and students with respect, dignity, impartiality, courtesy and sensitivity and refrain from acts of discrimination, harassment or bullying: sydney.edu.au/ab/policies/Student_code_conduct.pdf

5.3. Student resources and services

Links to other student services and resources are included on Blackboard and on the learning and teaching section of the Faculty website: sydney.edu.au/business/learning

6. Continual improvement of the Unit

6.1 Past Feedback

Each semester, students have provided feedback on things that work and things that do not work. Overall, students in the past year have indicated that they are happy with this unit and have made only minor suggestions for change. However, student feedback is valued in this unit. The end-of-semester Unit of Study Evaluation includes both ratings and opportunity for qualitative comments. All the ratings and comments are reviewed at the end of the semester to plan changes for the next semester in which this unit will be offered.

6.2 Improvements made

The course content has been revised in preparation for 2011, and a new unit of study name has been provided that matches better to the thrust of the unit. Changes have been made to the assessments, especially the vivas, and guest lectures have been arranged.

6.3. How feedback will be collected

Your feedback on this unit of study will be collected via a Unit of Study Evaluation (USE) during the final lecture.

7. Topic schedule

Topic	Date	Topic	Required Reading (See Section 4)	Assessments Due (See Section 3)
1	7 March	Introduction to Unit, Review of Statistical Foundations, Surveys and Censuses, Error and Bias, Survey Design, Ethics	Text: Chapters 1,2,3, and 4	
2	21 March	Survey Instrument Design,	Text: Chapters 8, 9, and 10	
	28 March			Homework Assignment 1
3	4 April	Sampling Frames, Simple Random Sampling, Stratified Sampling	Text: Chapter 13	
4	18 April	Stratified Sampling, Multistage Sampling, Guest Lecture	Text: Chapter 13	Homework Assignment 2
	4 May			Survey Design
5	16 May	Successive Occasions, Weighting and Expansion, Survey Economics, Nonresponse	Text: Chapters 14, 15, 19, and 20	
	18 May			Viva Examination
6	30 May	Response Rates, Measures of Quality, Survey Administration, Recent Developments	Text: Chapters 16, 21, 22, and 23	
	1 June			Homework Assignment 3