

MACQUARIE  
UNIVERSITY



FACULTY OF  
BUSINESS AND ECONOMICS

Unit code: DEM127  
Unit Name: **Demographic  
Fundamentals**

Semester 1, 2010  
*Department of Business*

**MACQUARIE UNIVERSITY  
FACULTY OF BUSINESS AND ECONOMICS  
UNIT OUTLINE**

**Year and Semester: 2010 Semester 1**

**Unit convenor: A/Prof. Nick Parr**

**[Prerequisites / Corequisites:] None.**

Students in this unit should read this unit outline carefully at the start of semester. It contains important information about the unit. If anything in it is unclear, please consult one of the teaching staff in the unit.

**ABOUT THIS UNIT**

**About Demography**

Demography is the study of the changing size and composition of human populations, and the causes and consequences of such change. This subject will be useful not only to those with an interest in learning about population change it will also provide knowledge and skills which will be valuable to those aiming to pursue study or careers in marketing, market research, economics, statistics, health, business and many other areas. The size and composition of markets, electorates, public service clienteles and the labour force all are related to demography. Because of this, demographic analysis can assist planning marketing campaigns, retail site locations, electoral campaign strategies and public sector resource allocation decisions, such as where to build schools and hospitals.

**Credit Points for this Unit: 3**

**The Rationale and Objectives of the Unit**

This unit will introduce students to the study of demography and provide a platform of knowledge and skills for further studies in this field. The main objective is to introduce students to the analysis of changes in population size and composition. The patterns of fertility, mortality and migration in Australia and other countries will be described, and their implications for population size and composition outlined. The main sources of demographic data and the main techniques for analysing population change will be introduced. Practical applications of demography in the public sector and the private sector will be discussed.

In addition to developing a knowledge of the basic elements of demography, the unit will assist students in developing skills in note-taking, accessing and analysing data, problem solving and critical thinking.

## TEACHING STAFF

| <u>Name</u>       | <u>Task</u> | <u>Room</u> | <u>Phone No.</u> | <u>Email</u>                                                 |
|-------------------|-------------|-------------|------------------|--------------------------------------------------------------|
| A/Prof. Nick Parr | Convenor    | E4A-626     | 9850 8570        | <a href="mailto:Nick.Parr@mq.edu.au">Nick.Parr@mq.edu.au</a> |

## Consultation Hours

Students are most welcome to visit the staff connected with the unit during their consultation hours. If you cannot make the scheduled consultation hour you are still welcome to visit the staff, however, since there is no guarantee that the staff will be available outside the hours below, phoning or emailing to make an appointment would be advisable. Students may also email enquiries.

| <u>Name</u>       | <u>Scheduled Consultation Hours</u>              |
|-------------------|--------------------------------------------------|
| A/Prof. Nick Parr | Tuesday 2:05pm – 2:55pm, Wednesday 11:05-11:55am |

## CLASSES

For each student there will be 3 hours face-to-face teaching per week consisting of 2 x 1 hour lectures and 1 x 1 hour tutorial. Each student should attend one of the scheduled lectures on Monday and one of the scheduled lectures on Wednesday.

The timetable for classes can be found on the University web site at:

<http://www.timetables.mq.edu.au/>

Please bring a calculator, lecture notes and the textbook to all tutorials. ***Please note that there will be no tutorials in the first week of this semester.***

## REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

### Recommended Textbook

Rowland, Donald (2003) *Demographic Methods and Concepts*, Oxford University Press. The book is available for purchase from the Co-op Bookshop.

Or

A.H. Pollard, Farhat Yusuf and G.N. Pollard, *Demographic Techniques* (third edition, 1990). This text is currently out of print. However, copies of the sections relevant to this unit (Chapters 1-6 and 8) have been placed, with the authors' permission, on the Macquarie University library e-reserve page <http://www.lib.mq.edu.au/reserve/>

### **Other Useful Sources of Information**

Khoo, S.E. and McDonald, P. (2003) *The Transformation of Australia's Population 1970-2030*. UNSW Press. Chapters 2-6 and 8 provide a useful material for several of the substantively-based topics. This reference can be viewed as an e-book via the library e-reserve page <http://www.lib.mq.edu.au/reserve/>

Parr, N.J. and Farhat Yusuf *A Workbooklet in the Elements of Demography* (available via the DEM127 webpage or from the library e-reserve webpage <http://www.lib.mq.edu.au/reserve/>) includes many data analytic exercises that should help students to prepare for tutorials, class tests and the final examination.

A list of other useful references may be accessed from the DEM127 page on the Macquarie University Online Learning@ MQ Facility <http://learn.mq.edu.au>

### **Overheads and Note-taking**

Copies of a selection of the overheads shown in lectures will be made available via Online Learning @ MQ <http://learn.mq.edu.au>

*Note that the overheads offer only a skeletal coverage of the topics covered in lectures that must be augmented by additional note-taking during the lecture or using the recommended references. Please also note that only some of the overheads shown in lectures are available (eg. ones with key formulae or definitions or with tables of data that would be too lengthy to copy down during a lecture).*

### **UNIT WEB PAGE**

Students may access unit material online through the Macquarie University Online Learning Facility <http://learn.mq.edu.au> using your Student ID Number and your Online Learning @ MQ password. A link to this facility, along with a limited range of other course materials, is also available via

[http://www.bus.mq.edu.au/undergraduate/units/DEM\\_units/dem127\\_elements\\_of\\_demography](http://www.bus.mq.edu.au/undergraduate/units/DEM_units/dem127_elements_of_demography)

Information about the Demography Program is at:

[http://www.businessandeconomics.mq.edu.au/areas\\_of\\_study/demography](http://www.businessandeconomics.mq.edu.au/areas_of_study/demography)

### **iLectures**

Lectures will be recorded using the iLectures system. Whilst the iLectures may provide an additional resource, students are advised that no guarantees are given in relation to the availability or quality of the sound recordings or the functioning of any related websites or links to files of recordings of lectures. Students are expected to attend the lectures on a regular basis and to compile notes during the course of the lectures. Thus any failing of the iLectures will not be accepted as grounds for appeal.

### **LEARNING OBJECTIVES AND OUTCOMES**

The learning objectives of this unit are:

- Developing a knowledge of basic demographic concepts;
- Developing a knowledge of the sources of demographic data;
- Developing an ability to learn, use and understand basic demographic techniques;
- Developing a knowledge and an understanding of changes in population size and composition in Australia and in other regions of the World;
- Developing a knowledge and an understanding of the patterns of fertility, mortality and migration in Australia;
- Developing a knowledge and a sense of the importance of the uses of demography in public and private sectors; and
- Developing an ability to compile and use notes.
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- The learning outcomes of this unit are:
- Demonstrating an ability to define and explain basic demographic concepts;
- Demonstrating an awareness of the ranges of demographic data which may be obtained from the main sources and of the strengths and limitations of such data through writing short essays and answering short answer questions;
- Demonstrating an ability to use basic demographic techniques to calculate demographic measures and to interpret the results of such calculations (this is a particularly important assessment criteria);
- Demonstrating a knowledge and an understanding of the patterns of change in the population size and composition in Australia and in other regions of the World through writing short essays and answering short answer questions;
- Demonstrating a knowledge and an understanding of the patterns of fertility, mortality and migration in Australia through data analysis using demographic techniques, writing short essays and answering short answer questions;
- Developing a knowledge and a sense of the importance of the uses of demography in public and private sectors through writing short essays;
- Demonstrating an ability to compile notes and to use them by writing short essays on relevant demographic topics under examination conditions.

In addition to the discipline-based learning objectives, all academic programs at Macquarie seek to develop students' generic skills in a range of areas. One of the aims of this unit is that students develop their skills in the following:

*Foundation skills of literacy, numeracy and information technology;*  
*Communication skills;*  
*Critical analysis skills;*  
*Problem-solving skills;*

#### **TEACHING AND LEARNING STRATEGY**

The teaching strategy consists of the provision of information in the two weekly lectures on Monday and Wednesday and one specified weekly tutorial. Copies of overhead slides for each topic will be provided via Online Learning @ MQ. It is recommended students print a copy of the slides beforehand and bring them to the lecture. It is expected that students will attend both the two weekly lectures and tutorial on a regular basis and will take additional notes during the lectures.

In addition to the time spent attending lectures and tutorials and doing assignments, each student is expected to spend a significant amount of time preparing for lectures and tutorials, updating lecture notes, learning the key formulae, attempting exercises from the textbook and workbooklet, reading the demographic literature, and revising for tests and exams (12 hours per week is recommended). Students are encouraged to follow developments in the Australian population and the population debate which are reported in the media.

A week-by-week list of the topics covered is provided on the following page.

**DEM127: DEMOGRAPHIC FUNDAMENTALS**  
**SCHEDULE OF LECTURES**  
**First Semester, 2010**

| <b>Date</b>                                                | <b>Topic</b>                                                                                           | <b>Lecturer</b> | <b>Tutorials &amp; Assignments</b>                           |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------|
| <b>Week 1</b><br>Monday 22 February<br>Wednesday 24 Feb.   | Introduction to demography<br>Sources of demographic data I                                            | NP<br>NP        | No tutorial                                                  |
| <b>Week 2</b><br>Monday 1 March<br>Wednesday 3 March       | Sources of demographic data II<br>Measures of the growth, size, & age-sex distributions of populations | NP<br>NP        | Tutorial 1<br>Assignment 1 given in tute                     |
| <b>Week 3</b><br>Monday 8 March<br>Wednesday 10 March      | Crude and specific rates<br>Population pyramids                                                        | NP<br>NP        | Tutorial 2                                                   |
| <b>Week 4</b><br>Monday 15 March<br>Wednesday 17 March     | Computation of life tables I<br>Computation of life tables II                                          | NP<br>NP        | Tutorial 3<br>Assignment 1 due<br>Assignment 2 given in tute |
| <b>Week 5</b><br>Monday 22 March<br>Wednesday 24 March     | What life tables can show us.<br>Marriage and Family in Australia                                      | NP<br>NP        | Tutorial 4                                                   |
| <b>Week 6</b><br>Monday 29 March<br>Wednesday 31 March     | Measurement of fertility<br>Fertility trends & differentials in Australia                              | NP<br>NP        | Assignment 2 due<br>Tutorial 5<br>Assignment 3 given in tute |
| <b>Mid-Semester Teaching Break (2 April–18 April)</b>      |                                                                                                        |                 |                                                              |
| <b>Week 7</b><br>Monday 19 April<br><br>Wednesday 21 April | <b>Class Test No. 1 (in lecture room and time slot)</b><br>Measurement of mortality & standardisation  | NP<br>NP        | Tutorial 6<br>Assignment 3 due<br>Assignment 4 given in tute |
| <b>Week 8</b><br>Monday 26 April<br>Wednesday 28 April     | <i>Public Holiday (no lecture)</i><br>Mortality trends & differentials in Australia                    | NP<br>NP        | Tutorial 7<br>Class test 1 returned                          |
| <b>Week 9</b><br>Monday 3 May<br>Wednesday 5 May           | Population projections I<br>Population projections II                                                  | NP<br>NP        | Tutorial 8<br>Assignment 4 due<br>Assignment 5 given in tute |
| <b>Week 10</b><br>Monday 10 May<br>Wednesday 12 May        | International Migration and Australia<br>Internal migration & population distribution in Australia     | NP<br>NP        | Tutorial 9<br>Assignment 5 due                               |
| <b>Week 11</b><br>Monday 17 May<br>Wednesday 19 May        | World population growth<br>Demography of Australia's Indigenous population.                            | NP<br>NP        | Tutorial 10                                                  |
| <b>Week 12</b><br>Monday 24 May<br><br>Wednesday 26 May    | <b>Class Test No. 2 (in lecture room and time slot)</b><br>Uses of demography in the private sector    | NP<br>NP        | Tutorial 11                                                  |
| <b>Week 13</b><br>Monday 31 May<br><br>Wednesday 2 June    | Uses of demography in the public sector<br>Conclusion: Exam format & unit evaluation                   | NP<br>NP        | Tutorial 12<br>Class test 2 returned                         |

Lecturer: (NP) Dr. Nick Parr

## RELATIONSHIP BETWEEN ASSESSMENT AND LEARNING OUTCOMES

### Assessment Tasks

Student achievement of the learning outcomes listed in an earlier section will be assessed by five assignments, two class tests, and a final examination. The weighting given to the various assessment tasks will be:

### Weighting of Assessment Tasks

|                                    |            |
|------------------------------------|------------|
| <b>Assignments (five in total)</b> | <b>15%</b> |
| <b>Class Test 1</b>                | <b>10%</b> |
| <b>Class Test 2</b>                | <b>15%</b> |
| <b>Final Exam</b>                  | <b>60%</b> |

In this unit there is no formal requirement for students to achieve a pass in the final examination in order to pass the unit. However a relatively poor performance in the final exam may adversely affect the assessment of marginal grades.

### Attendance

Students are advised that a poor record of attendance in lectures and tutorials may adversely affect the grade awarded. Satisfactory attendance is 75% of the lectures and tutorials for which attendance is taken, and failure to achieve this attendance may adversely affect marginal grading decisions. Tutors may refuse to mark the assignments of students who have an unsatisfactory record of attendance in tutorials or who have previously been late in submitting assignments (without satisfactory evidence of unavoidable disruption).

### Alignment Between Assessment Tasks and Learning Objectives and Outcomes.

The five assignments are designed to help students to progress towards the learning outcomes through practising what they have learned in the lectures, assessing the quality of their understanding, and obtaining feedback which will further assist their learning. Major demographic concepts and techniques introduced in the lectures are incorporated into the five assignments. Assignment 1, which will test your knowledge of some of the more basic techniques covered in the unit, will (except for cases where submission is late) be returned to you before **31 March (the last date to withdraw without academic of financial penalty)**, thus providing you with an indication of your ability to handle the unit material before the census date.

Questions in the class tests and the final exam will include calculating and interpreting major demographic measures, explaining demographic concepts, and writing short essays/notes on certain demographic topics. The two class tests and the final examination will also include a section of multiple choice questions which will be used to assess students' knowledge and understanding of the basic demographic concepts, structures and trends. All questions are designed to assess students' learning outcomes listed in the above section.

### Criteria and Standards Against Which Individual Assessment Tasks Are Judged

The assignments generally incorporate multiple question parts. The maximum marks available for each part will be indicated on the assignment sheets. Where a question part

involves calculations the marks awarded will reflect whether the answers are correct, whether the units of measurement are stated clearly, and whether an outline of the method used to derive the answers is presented clearly. Where a question part involves the description, interpretation or discussion of the determinants of the results of calculations or the data provided, the assessment will reflect the coverage of the results and data provided, the understanding of the strengths and limitations of measures which is demonstrated, and the knowledge of the determinants of the demographic variables (whether derived from lectures, through reading the literature, or through logical deduction) which is evident. Expression with unclear meaning may detract from the mark awarded. An innovative use of additional summary measures or graphs may attract a small amount of additional credit. All assignments are intended to be undertaken independently and individually by students and students who collude excessively or plagiarise will incur penalties for doing so.

The class tests will also incorporate multiple parts. The maximum marks available for each part will be indicated on the test papers. Where a question part involves calculations the marks awarded will reflect whether the answers are correct, whether the units of measurement are stated clearly, and whether an outline of the method used to derive the answers is presented clearly. Questions requiring statements of definition or explanation will be marked according to whether the required statements are made fully, correctly, and clearly. Multiple choice questions will be marked according to whether the unique, correct answer is indicated clearly. Students who miss a class test due to unavoidable disruption are advised to contact the Convenor at the earliest possible opportunity. In such cases, provided suitable documentation of the unavoidable disruption is provided to the convenor and attendance in lectures and tutorials outside periods of documented unavoidable disruption has been satisfactory, the other class test or examination components may be weighted up (with scaling to ensure comparability in the marks). If suitable documentation is not provided or attendance is unsatisfactory then a mark of zero will be recorded for the missed class test.

The final examination will involve multiple questions. Some of these questions will be marked according to the criteria and standards outlined in relation to the assignments. There will also be a question which will assess students' ability to demonstrate they can write notes on relevant demographic topics and one requiring short written answers. The marking of the "writing notes" question will reflect primarily the content knowledge which is demonstrated. Written communication skills and academic discourse skills which are demonstrated may also affect the mark awarded. There may also be some multiple choice questions on the final exam.

### **Distribution of and Due Dates for the Submission of Assignments**

Details of the dates for distribution of and submission of assignments are presented on the schedule of lectures. Copies of the assignments should also be available from the unit online learning page

The due dates and times for the submission of assignments will be the dates and times of the tutorials. All assignments should be submitted to your tutor at the tutorial. All assignments submitted should have a cover sheet which clearly states the student's name, ID number, the name and code of the unit, the tutor's name, and the number and date of submission of the assignment. Penalties will be incurred for the late submission of assignments, unless satisfactory evidence of unavoidable disruption is presented.



## **The Form and Timing of Feedback on Assignments and Class Tests**

Assignments together with the marks awarded will be returned to the students promptly (generally within two weeks of submission). Model solutions to the various assignments, together with feedback on some of the more common errors made by the group of students as a whole will be provided on the online learning facility after all assignments have been returned. Students are advised to compare their solutions to the model solutions to identify and to learn from any errors they have made. The class tests also will be returned to the students. Feedback will be provided either in the form of discussion of the solutions in tutorials or through the provision of model solutions via online learning.

## **Final Examination**

A 3 hour final examination for this unit will be held during the University Examination period. The rationale for setting the exam is that it will provide a rigorous and comprehensive assessment of students' achievement of the learning outcomes. Students will be permitted to use a small battery-operated calculator in tests and exam, provided it does not have a text-returnable capacity. Dictionaries are not allowed in class tests and exam.

The University Examination period in the First Half Year 2010 is from 9 June to 25 June. You are expected to present yourself for examination at the time and place designated in the University Examination Timetable. The timetable will be available in Draft form approximately eight weeks before the commencement of the examinations and in Final form approximately four weeks before the commencement of the examinations.

<http://www.timetables.mq.edu.au/exam>

The only exception to not sitting an examination at the designated time is because of documented illness or unavoidable disruption. In these circumstances you may wish to consider applying for Special Consideration. Information about unavoidable disruption and the special consideration process is available at

<http://www.reg.mq.edu.au/Forms/APSCon.pdf>

If a Supplementary Examination is granted as a result of the Special Consideration process the examination will be scheduled after the conclusion of the official examination period.

You are advised that it is Macquarie University policy not to set early examinations for individuals or groups of students. All students are expected to ensure that they are available until the end of the teaching semester, that is the final day of the official examination period.

## **PLAGIARISM**

The University defines plagiarism in its rules: "Plagiarism involves using the work of another person and presenting it as one's own." Plagiarism is a serious breach of the University's rules and carries significant penalties. You must read the University's practices and procedures on plagiarism. These can be found in the *Handbook of Undergraduate Studies* or on the web at: <http://www.student.mq.edu.au/plagiarism/>

The policies and procedures explain what plagiarism is, how to avoid it, the procedures that will be taken in cases of suspected plagiarism, and the penalties if you are found guilty. Penalties may include a deduction of marks, failure in the unit, and/or referral to the University Discipline Committee.

## **STUDENT SUPPORT SERVICES**

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at <http://www.student.mq.edu.au>.

Information about student support services is also available from the Business and Economics Student Services (BESS) office in E4B106 and via [http://www.businessandconomics.mq.edu.au/current\\_students/ug](http://www.businessandconomics.mq.edu.au/current_students/ug)

## **CLASSROOM ETIQUETTE**

Students are expected to arrive on time, certainly before five minutes past the hour, and not to leave until the class ends. If you have a recurring problem that makes you late, or forces you to leave early, have the courtesy to discuss this with your lecturer/tutor.

Students are expected to be quiet during lectures unless, of course, class participation is required. Mobiles should be turned off during classes; not simply set to “silent”.