BUSA1027

Demographic Fundamentals

Session 1, In person/Online-scheduled-weekday, North Ryde 2022

Department of Actuarial Studies and Business Analytics

Contents

General Information	2
Learning Outcomes	2
General Assessment Information	3
Assessment Tasks	3
Delivery and Resources	5
Unit Schedule	6
Policies and Procedures	7
Changes from Previous Offering	9

Disclaimer

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General Information

Unit convenor and teaching staff
Unit Convener, Lecturer and Tutor
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Wednesday 11am

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Credit points
10

Prerequisites

Corequisites

Co-badged status

Unit description
This unit introduces students to demography and provides a platform of knowledge and skills for further demography/population related studies. Students will develop skills in the analysis of changes in population size and composition. The general patterns of fertility, mortality and migration in Australia and other countries will be studied, and their implications for population size and composition will be explained. The main source of demographic data and the main techniques for analysing population change will be introduced. Practical applications of demography in the public and private sector will be discussed.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Define and explain basic demographic concepts.

ULO2: Recognise the main sources of demographic data, and of the strengths and limitations of the ranges of data that can be obtained from these sources.

ULO3: Apply basic demographic techniques to calculate demographic measures and interpret the results.

ULO4: Analyse trends in population size and composition in Australia and internationally.

ULO5: Recognise the patterns of fertility, mortality and migration in Australia through data analysis using demographic techniques.

General Assessment Information

Late submissions of assessments Unless a Special Consideration request has been submitted and approved, no extensions will be granted. There will be a deduction of 10% of the total available assessment-task marks made from the total awarded mark for each 24-hour period or part thereof that the submission is late. Late submissions will only be accepted up to 96 hours after the due date and time.

No late submissions will be accepted for timed assessments – e.g., quizzes, online tests.

Table 1: Penalty calculation based on submission time

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Submission time after the due date (including weekends)	Penalty (% of available assessment task mark)	Example: for a non-timed assessment task marked out of 30
< 24 hours	10%	10% x 30 marks = 3-mark deduction
24-48 hours	20%	20% x 30 marks = 6-mark deduction
48-72 hours	30%	30% x 30 marks = 9-mark deduction
72-96 hours	40%	40% x 30 marks = 12-mark deduction
> 96 hours	100%	Assignment won't be accepted

Special Consideration

To request an extension on the due date/time for a timed or non-timed assessment task, you must submit a Special Consideration application. An application for Special Consideration does not guarantee approval.

The approved extension date for a student becomes the new due date for that student. The late submission penalties above then apply as of the new due date.

Assessment Tasks

Name	Weighting	Hurdle	Due
Assignment	50%	No	Weeks 4, 7, 9 and 12

Name	Weighting	Hurdle	Due
Final Examination	50%	No	University Examination Period (6 June to 24 June 2022)

Assignment

Assessment Type [1]: Project
Indicative Time on Task [2]: 40 hours
Due: **Weeks 4, 7, 9 and 12**
Weighting: **50%**

The assignment is organised in four parts. Students will need to conduct data analysis, interpretation, discussion and write a report.

On successful completion you will be able to:

- Define and explain basic demographic concepts.
- Recognise the main sources of demographic data, and of the strengths and limitations of the ranges of data that can be obtained from these sources.
- Apply basic demographic techniques to calculate demographic measures and interpret the results.
- Analyse trends in population size and composition in Australia and internationally.
- Recognise the patterns of fertility, mortality and migration in Australia through data analysis using demographic techniques.

Final Examination

Assessment Type [1]: Examination
Indicative Time on Task [2]: 20 hours
Due: **University Examination Period (6 June to 24 June 2022)**
Weighting: **50%**

A two-hour exam will be held during the University Examination Period.

On successful completion you will be able to:

- Define and explain basic demographic concepts.
- Recognise the main sources of demographic data, and of the strengths and limitations of

the ranges of data that can be obtained from these sources.

- Apply basic demographic techniques to calculate demographic measures and interpret the results.
- Analyse trends in population size and composition in Australia and internationally.
- Recognise the patterns of fertility, mortality and migration in Australia through data analysis using demographic techniques.

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[1] If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Writing Centre for academic skills support.

[2] Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Classes

For each student there will be 3 hours teaching per week, consisting of two-hours of lecture material and a one-hour tutorial. Each student should watch and listen to the scheduled lecture and participate in one of the scheduled tutorials each week. Information on class delivery will appear on iLearn.

The **timetable** for classes can be found on the University web site at: http://www.timetables.mq.edu.au/2022

Students who wish to change tutorial classes must request permission from the Unit Convener. Attendance in all the tutorials and online use of lecture material will be monitored. When tutorial attendance is not possible, it is student's responsibility to inform the tutor and to ensure that they listen to the recording.

Please bring a calculator and lecture notes to all tutorials. Please note that the tutorial classes will start in the first week of the session.

Students are expected to arrive on time and not leave until the class ends. Students with commitments that regularly prevent them from attending the entire tutorial are requested to discuss the situation with the lecturer or tutor.

In addition to the time spent listening to lectures and attending tutorials and doing assignments, each student is expected to spend a significant amount of time preparing for tutorials, updating lecture notes, reading the recommended demographic literature, learning the key definition and formulae, attempting tutorial exercises and past exam papers, and revising for the final exam (7 hours per week is recommended). Students are also encouraged to follow
recent development and public debates in relation to population and society in Australia and

elsewhere in the media.

Recommended Texts and/or Materials

Rowland, Donald (2003). *Demographic Methods and Concepts*, Oxford University Press.

Readings may be accessed via the unit iLearn page or Leganto.

Technology Used and Required

Unit Web Page: Students can access BUSA1027 unit materials online through Macquarie University's online learning environment, iLearn. Log into iLearn at ilearn.mq.edu.au using student ID number and MQ Student Portal password.

Students are expected to be familiar with the use of basic office software, including word processing, spreadsheets and PowerPoint.

Lecture recordings (iLectures): Lectures will be recorded using the Echo360 Active Learning Platform and made available on iLearn.

Unit Schedule

Preliminary schedule. Note schedule may be subject to change

Week 1: Part 1 Introduction. Part 2 Sources of demographic data.

Week 2: Age and Sex. Part 1 Population pyramids. Part 2. Measures of age and sex and their trends. Part 3 Crude and age-specific rates of births and deaths and their trends.

Week 3. Population Growth. Part 1. Measuring population growth. Part 2. The demographic transition Part 3. Trends in population ageing.

Week 4. Life Tables and Life Expectancies. Part 1. What is a life table? Parts 2 and 3. Definitions of columns of a life table. Part 4. How to compute a life table. Part 5. Using life tables to analyse mortality.

Week 5 Births. Part 1 Defining and measuring fertility Part 2 Variation in fertility patterns between subgroups of Australia's population Part 3 Trends in fertility over time

Week 6 Deaths. Part 1 Methods for comparing mortality levels. Part 2. Trends in cause of death (including COVID-19) Part 3 Mortality patterns in Australia

Week 7 International Migration. Part 1 Global trends. Part 2. Immigration rules and trends for Australia.

Week 8 Population Projections. Part 1 Methods of population projection. Part 2. Population analytics using population projections.

Week 9: Immigration, Age and Ethnicity. Part 1. Effects of immigration on age-sex structure. Part 2. The demography of immigrant groups in Australia.Part 3 Australia's indigenous population.

Week 10: Australia's Changing Population Geography. Part 1. Overview. Part 2. Internal migration. Part 3. Patterns of population growth in Australia. Part 4. Patterns of age structure in Australia.

Week 11 Sydney's Population. Part 1 Patterns of population growth. Part 2. Differences in age between Sydney's suburbs.

Week 12. Analysis Using Demographics. Part 1. Uses of demography in the public sector. Part 2 Uses of demography in the private sector.

Week 13. Conclusion

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Assessment Procedure
- Complaints Resolution Procedure for Students and Members of the Public
- Special Consideration Policy

Students seeking more policy resources can visit Student Policies (https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.edu.au) and use the search tool.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/student-conduct

Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe academic integrity – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free online writing an

d maths support, academic skills development and wellbeing consultations.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

The Writing Centre

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Workshops
- Chat with a WriteWISE peer writing leader
- Access StudyWISE
- Upload an assignment to Studiosity
- Complete the Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

Student Services and Support

Macquarie University offers a range of Student Support Services including:

- IT Support
- Accessibility and disability support with study
- Mental health support
- Safety support to respond to bullying, harassment, sexual harassment and sexual assault
- Social support including information about finances, tenancy and legal issues

Student Enquiries

Got a question? Ask us via AskMQ, or contact Service Connect.

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Changes from Previous Offering

The unit content has been updated to incorporate the most-recently published data and discussion of related issues.