

## ASSESSMENT TASK 1: Population Analysis - Laboratory Report

COMMONWEALTH OF AUSTRALIA

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### Timeline:

The deadline for submission of the final laboratory report is **Monday 27<sup>th</sup> August 2007, 4.00pm.**

Laboratory session 3 (week 3) has been set aside for data collection.

The course coordinators are available to provide assistance with data analysis (e.g. construction of life tables and graphs) and report writing (queries relating to format, content, data interpretation etc) during the week 1 and 2 laboratory sessions.

### Rationale for Task:

Throughout the Human Biology courses there has been an emphasis on the development of research and communication skills within a discipline specific context. To date students have been introduced to, and given the opportunity to apply through a variety of assessment tasks, skills in the location, interpretation, critical evaluation and integration of scientific information. While previous assessment tasks have been based around scientific research conducted by other individuals and reported in the literature, this assessment task requires that students collect and interpret their own scientific data set. These data are then to be discussed in a short, written report supported by evidence (which is appropriately acknowledged) from similar studies in the research literature.

### Aims:

The broad focus for this assessment task is to undertake an analysis of the characteristics of a human population in order to gain an understanding of:

- basic concepts of population demography
- how populations change over time
- factors that influence population change, and
- what past and/or current environmental, social and political circumstances might predict about the composition of future populations.

A suggested way of collecting relevant data for analysis, e.g. information about the age composition and sex ratio with a population, is to visit a cemetery and record details of ages at death for males and females who died during a particular time period. [Note: You may choose to obtain your data in some other way. This is generally acceptable, but you must fully document how and from where you obtained data in the Materials and Methods section of your report].

**Please note: Students are NOT permitted to request electronic data records directly from cemeteries.**  
Any student wishing to access such electronic records must contact either Eleanor or Mario for further information.

Through the successful completion of this assessment task each student has the opportunity to: -

1. Apply scientific method in the investigation of human population dynamics.
2. Learn about methods of data collection and their limitations, e.g. biases arising from sampling techniques and difficulties/limitations in data interpretation arising from collection methods.
3. Develop skills in the manipulation of data sets via the construction of life tables, and survivorship and mortality curves (graphs).
4. Investigate/research factors that shape the composition and dynamics of human populations.
5. Further develop skills in the communication of scientific information through the preparation of a short written report about the characteristics of the chosen population.
6. Consolidate skills in library research (use of search engines, indexes and databases), integration and referencing of scientific information.
7. Develop skills in critical analysis through self-evaluation of the report against a set of criteria around which the report will be assessed.

## **Task Instructions:**

The assessment task involves writing a short scientific report based on the collection and analysis of demographic data for a specific population of humans. **You already have all of the instructions required to complete the task.** Details of how to go about collecting and interpreting population data are provided in the notes for **Lab 2 – Doing Science** available on MyUni. Information about the general format of a scientific paper or report is available in the notes for **Lab 1: Principles of Scientific Writing**. (Copies of these notes are also available on MyUni).

Clarification of several aspects of the task instructions in Lab 2 is presented below.

- i. You may choose to sample a time period and location different from the ones listed in the laboratory notes, e.g. age at time of death during a particular year, or mortality patterns for individuals who are buried in a rural as compared with an urban locality. What population you sample and the time interval you use will depend on the hypothesis or question you are posing about the composition of the population, or the aspect of population dynamics you wish to investigate. Similarly, the time interval chosen may depend on availability of a large enough sample size.
- ii. It is acceptable to collect data by methods other than visiting a cemetery (**with the exception of accessing electronic data directly from the cemetery** – see previous page). You must, however provide full details of how and from where you accessed your data set.
- iii. You may choose to share the collection of data with a group of other students. Each student must however analyse the data separately and write up their own report about the findings.
- iv. There is no prescribed page or word limit for the report, but it is expected that the topic can be adequately presented in 6-8 pages, excluding figures, tables, references and appendices.
- v. It is expected that the format of the written report will follow the guidelines for a short paper or report provided in the notes for Lab 1.
- vi. Hand written reports are acceptable **as long as they are legible.**

To assist you in determining whether your report includes all of the attributes that will be assessed, please self-evaluate your report against the criteria identified in the **Report Checklist**. (This is provided as a separate document that you can download and print from MyUni). The checklist must be attached to your submitted assignment, along with a coversheet that includes a signed statement to the effect that the report is your own work. Please note that this checklist is based on the RSD Marking Criteria sheet for this task, which can also be downloaded from MyUni.