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Stockholm University

Department of Sociology

# Basic Demographic Methods

7.5 credits, Fall 2022
Syllabus


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**Instructors**
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**Aims**
Basic Demographic Methods (BDM), a course at advanced level, aims to develop students' analytical and interpretative skills by familiarizing them with basic concepts and measures in demography. Students will use, present and interpret basic demographic methods, including the life table, standardization, and population forecasting. Such knowledge is essential for work with statistical materials on populations and will be useful for most quantitative social science. As the course is based on the idea of learning by doing, attendance is essential to attain the learning outcomes.

**Organization**
The course is provided at full-time basis over 4.5 weeks. Teaching and learning is conducted through lectures, seminars, lab and home exercises, and a final exam.

**Learning outcomes**
Upon the completion of the course, the student is expected to be able to:

*In terms of knowledge, understanding, and competence:*
- Use, describe and interpret, compare, and discuss the validity of the following:
  - Simple ratios, probabilities and rates, crude and specific rates
  - Lexis diagram
  - Standardization
  - Cohort life table
  - Period life table
  - Reproduction rates; parity progression rates
  - Measures of central age; Measures of population change; dependency ratios
  - Migration rates
  - Basic cohort-component population projection

- Link theory and demographic methods that are appropriate for a specific demographic research question.

*In terms of attitudes and values:*
- Search for, compare and critically review demographic data relevant for a particular research question;
- Compare and evaluate basic methods used in research on demographic questions.
- Carry out work in a responsible way, including keeping realistic time schedules

## Assessment and examination

The assessment consists of eight **individual** assignments and one **individual** exam, each to be submitted at a specific deadline. Assignment eight (8) is carried out in the lab with compulsory attendance.

The eight individual assignments consist of using, describing, presenting, comparing, as well as accounting for, interpreting and discussing the validity of the following:
1) Simple ratios, probabilities and rates, crude and specific rates.
2) Lexis diagram
3) Age standardization; Measures of population change
4) Cohort life table
5) Period life table
6) Measures of fertility
7) Measures of migration, population structure, and population change
8) Basic cohort-component population projection

Each of the 8 individual assignment receives a score between 1 and 10. The passing score for each exercise is 5. Students who fail an assignment may resubmit within two weeks. A re-submitted assignment can receive a score up to a limit of 7. An assignment submitted after the corresponding deadline can receive a score up to a limit of 5. To achieve a "Pass" for the course, students need to receive a "Pass" in all individual assignments and the exam. The weight of the individual assignments and the individual exam in the final assessment is 50% each.

|  | Ex 1 | Ex 2 | Ex3 | Ex4 | Ex5 | Ex6 | Ex 7 | Ex8 | Exam |
|---|---|---|---|---|---|---|---|---|---|
| Score range | 1-10 | 1-10 | 1-10 | 1-10 | 1-10 | 1-10 | 1-10 | 1-10 |  |
| Passing score | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |  |
| Weight in final assessment | 50% | | | | | | | | 50% |

The student's final achievement (based on their performance in the individual assignments and the exam) is graded to A=Excellent, B=Very good, C=Good, D=Satisfactory, E=Sufficient, Fx=Not sufficient, F=Fail.

Students with grade Fx or F at an exam are entitled to take another exam as long as the course is provided in order to obtain grade E at least. A student with E or higher is not entitled to another examination to raise his/her grade. Students who received grade Fx or F on exams twice from the same examiner can request to be evaluated by another examiner. Such request should be sent to the Director of Studies.

Examination takes place during the course and there is a final exam at the end of the course. All course work must be submitted no later than one week after completion of the course to be examined during the current course. If a student fails to meet this deadline or leaves at least one task with significant errors that must be resubmitted, examination will take place in connection with the course being given the next semester or at the reexamination.

**Clear**, **convincing, and correct** interpretations are necessary for a high grade in the exercises and the exam.

*Plagiarism, cheating and unauthorized cooperation*
It is the responsibility of the student to be familiar with the rules for examination. Detailed information is available at Stockholm University's website www.su.se/regelboken. Teachers are obliged to report suspicion of cheating and plagiarism to the Director of Studies and the Disciplinary Board. An example of plagiarism is to formally or almost verbatim copy a text (even a single sentence) without indicating where this comes from. This also applies to texts you have previously written (self-plagiarism). Study groups are encouraged, but when it comes to individual course work, students must take care to submit independent work and not unauthorized cooperation.

*Interim provisions*
Students may request that examination according to this syllabus be completed up to three semesters after it expires. The request is to be directed to the Director of Studies. This regulation is valid for all assessed parts of the course.

# Literature list

***Main literature***
Santow, Gigi & Sven Drefahl (2019). *Demographic Methodology II*. Stockholm University Demography Unit.
*Available from Athena.*

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

***Additional readings (Reference, not compulsory)***
Hartman, Michael (2007). *Demographic Methods for the Statistical Bureau*. Statistics Sweden. (To be purchased at the student office).

Weeks, John (2008). *Population: An Introduction to Concepts and Issues*. Wadsworth. Tenth edition. Chapter 4 on Demographic data, pp. 108-145; pp. 176-185, Measuring mortality; pp. 234-241, Measuring fertility.

Preston, Samuel, Patrick Heuveline, and Michel Guillot (2001). *Demography: Measuring and Modeling Population Processes*.

***Additional readings on fertility analysis (Reference, not compulsory)***
Ryder, N. 1986. Observations on the history of cohort fertility in the United States. *Population and Development Review* 12: 617-643.

Ní Bhrolcháin, M., 1992. Period paramount? A critique of the cohort approach to fertility. *Population and Development Review* 18: 599-629.

Van Imhoff, E., 2001. On the impossibility of inferring cohort fertility measures from period fertility measures. *Demographic Research* [Online] 5. Available http://www.demographic-research.org/Volumes/Vol5/2.

***Additional readings on life-table estimation***
***Compulsory***
Andersson, Gunnar and Dimiter Philipov, 2002. "Life-table representations of family dynamics in Sweden, Hungary, and 14 other FFS countries: A project of descriptions of demographic behavior". *Demographic Research* 7(4): 67-144. Available http://www.demographic-research.org/Volumes/Vol7/4.

***Readings on population projections***
***Compulsory***
O'Neill et al. (2001). A guide to global population projections. Demographic Research 4(8). http://www.demographic-research.org/volumes/vol4/default.htm

***Reference for Swedish-readers (Recommended but not compulsory)***
Hofsten, Erland, 1982. *Demografins grunder*, Lund: Studentlitteratur, chapter 4.1-4.7 samt kap 4.10-4.11 (25 pages). Voluntary reading for students who read Swedish.

Demografi : befolkningsperspektiv på samhället / Ann-Zofie Duvander, Jani Turunen (red.).. - 2017 - Upplaga 1. - ISBN: 9789144119