Instructor: Patrick Heuveline (Sociology), Hiram Beltrán-Sánchez (CHS)

Class meets: Thursdays, 3:00 to 5:50pm
Course website: https://moodle2.sscnet.ucla.edu/course/view/16W-SOCIOLM213A-1
Office Hours: Wednesdays, 1:30 to 2:50pm, PAB #4284P
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This course is an introduction to the concepts and methods of demographic analysis. It is intended to provide students with a general understanding of the processes that shape population size, structure, and dynamics and with the logical bases for the most common measures of these processes. The emphasis will be on measurement issues in human populations while making clear the broader relevance of demographic analysis to the study of other populations or systems.

Reading Requirements

The course largely follows a recent textbook:

Selected chapters will be assigned each week. It is imperative that these chapters be read before class so that our discussion can focus on stressing important issues and clarifying confusing points rather than repeating what is already in the textbook. The book has been ordered from the UCLA Bookstore.

Although the textbook is meant to be self-standing, other selected readings are listed below. Most of these other readings are either classic references, or new, not yet standard developments that could not be fully described in the textbook. Also included are applications of the methods in relatively recent journal articles. These readings can be considered as optional but should prove useful in understanding the development of the methods and concepts of demographic analysis. Some of these articles can be found on JSTOR. Others will be found on the course website. Several of the additional readings are from:


where many other useful additional readings can be found. Another good reference is the 

Multilingual Demographic Dictionary, which is now available online in 14 language modules at www.demopaedia.org.

Grading

The course grade will be based on problem sets (40%), a mid-term (25%) and a final exam (35%). Both exams will be in class, open books. Exams will require the use of a calculator, and completion of the problem sets will be greatly facilitated by the use of spreadsheet software, such as Microsoft’s Excel. Many of the functions to be performed in these problem sets are also available in standard statistical packages, but those are less useful to understand the procedures.
However, the Stata manuals and tutorial provide good descriptions, terse though they are, of the methods and their various options. Also of note, most of the calculations have now been implemented in R. See for instance: http://cran.r-project.org/web/packages/epitools/index.html

The problem sets will consist of repetition and/or comprehension drills. Repetition drills are simple replications of the techniques described in the textbook. These should be completed before these techniques are discussed in class. Comprehension drills will require an understanding of the assumptions on which some of these techniques are built or an application to a different context. These will be due the week after we have finished discussing a chapter in class. Depending on the pace of our class discussions, the schedule of due dates for problem set is thus subject to change, but the provisional calendar is as follow:

Problem Set 1: **January 14th** (repetition drills, Chapter I)
Problem Set 2: **January 21st** (comprehension drills, Chapter I; repetition drills, Chapter II)
Problem Set 3: **January 28th** (comprehension drills, Chapter II; repetition drills, Chapter III)
Problem Set 4: **February 4th** (comprehension drills, Chapter III; repetition drills, Event History Analysis)
Problem Set 5: **February 18th** (repetition drills, Chapter IV)
Problem Set 6: **February 25th** (comprehension drills, Chapter IV; repetition drills, Chapter V)
Problem Set 7: **March 3rd** (comprehension drills, Chapter V; repetition drills, Chapter VI)
Problem Set 8: **March 10th** (comprehension drills, Chapters V & VI)

Students needing an academic accommodation based on a disability should contact the Office for Students with Disabilities (OSD) located at (310) 825-1501 or A255 Murphy Hall. When possible, students should contact the OSD within the first two weeks of the term as reasonable notice is needed to coordinate accommodations. For more information visit www.osd.ucla.edu.

**Course Schedule**

1. **Course introduction (January 7th)**
   
   

2. **Population Change: Linear and Exponential Growth; Doubling Time; The Components of Population Change (January 14th)**
   
   
   
   

3. **Mortality I: Probabilities; Age-Specific Rates; Standardization and Decomposition; Period Rates, Cohort Rates, and The Lexis Diagram (January 21st)**
   
   Preston et al. 2001. Chapter I, pp.16-20 & Chapter II.


4. **Mortality II: Cohort and Period Single-Decrement Life Tables (January 28th)**


5. **Mortality III: Survival Analysis (February 4th)**


6. **Midterm (February 11th)**

7. **Marriage: Marriage Propensities; Singulate Mean Age of Marriage; Cohort and Period Multi-Decrement Life Tables (February 18th)**


8. Fertility: Basic Measures, Aggregate Fertility Models; Period and Cohort Fertility (February 25th)


10. Migration: Population Projections with Migration; Residual Migration Estimation; Error of Closure Revisited (March 10th)

Preston et al. 2001. Chapter VI, pp.124-9; Chapter XII, pp.256-59.
