Sociology 6230
Techniques of Demographic Analysis

Dr. Eric Reither
Utah State University, Fall 2017
Wednesdays, 4:30-7:00 p.m.
Old Main 207

Contact Information:
Phone Number: Office 435-797-9856
Office Location: 338E Old Main (Dean’s office complex)
Office Hours: Tuesdays 2:00-3:00 p.m. and Wednesdays 10:00-11:00 a.m.
e-mail: eric.reither@usu.edu

Overview:
Sociology 6230 will introduce you to basic and some intermediate techniques of demographic data analysis. These techniques are used to study population characteristics and dynamics such as mortality, fertility, growth and momentum. By the end of the course, you will know how to calculate and interpret demographic measures that are frequently used in social science, epidemiology and many other disciplines. You will also learn about key sources of demographic data and apply techniques of demographic analysis to those data through assignments and a group research project.

Calculus is not a prerequisite for this course, nor is it featured on assignments or exams. However, I will use continuous notation periodically to enrich your understanding of some fundamental demographic concepts. One of your texts (Preston, Heuveline and Guillot 2001) also makes regular use of continuous notation. I encourage you to browse through the first few chapters of any Calculus text to aid your studies in this course.

Like other social scientists, demographers rely on computer programs to help with analyses that are computationally intensive. In this course, you may use statistical software to analyze data for your research project. However, we will emphasize more rudimentary technologies like calculators and spreadsheets in our day-to-day work, as these tools will require that you learn the material deeply. Once you master the material at this level, you will have little difficulty learning how to compute and interpret these measures using statistical software.

Broadly stated, the objectives of this course are to:

1. Learn fundamental principles that underlie the study of populations;
2. Gain factual knowledge about basic and intermediate techniques of demographic analysis;
3. Develop a core set of skills and competencies needed by population researchers;
4. Apply course material by conducting original research;
5. Enhance skills in professional collaboration by working with a research team.
REQUIRED TEXTBOOKS, ADDITIONAL READINGS AND SUPPLIES

Required Textbooks


Additional Readings

Periodically throughout the course, I will assign additional readings. I will announce these readings in advance of the date that I expect you to read them. Whenever possible, I will make these readings available electronically.

ADDITIONAL ASSISTANCE AND SPECIAL NEEDS

I encourage students who anticipate or experience difficulties with the course to contact me for additional assistance. If you have a documented disability and need reasonable accommodation to participate in this course, please visit with me immediately.

Additional information regarding university policies on special accommodations, academic freedom and integrity, the grievance process, and withdrawal policies can be found online at: [http://www.usu.edu/provost/faculty-life/syllabus.cfm](http://www.usu.edu/provost/faculty-life/syllabus.cfm). Please contact me if you have questions.

EVALUATION AND GRADING POLICY

Grades will be awarded based on assignments, two exams and a group research project.

Your grade will be determined via the following scale:

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<thead>
<tr>
<th>Grade</th>
<th>Points Range</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>460-500</td>
<td>(92-100%)</td>
</tr>
<tr>
<td>A-</td>
<td>450-459</td>
<td>(90-91.9%)</td>
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<tr>
<td>B+</td>
<td>435-449</td>
<td>(87-89.9%)</td>
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<tr>
<td>B</td>
<td>410-434</td>
<td>(82-86.9%)</td>
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<tr>
<td>B-</td>
<td>400-409</td>
<td>(80-81.9%)</td>
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<td>C+</td>
<td>385-399</td>
<td>(77-79.9%)</td>
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<td>C</td>
<td>360-384</td>
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<td>C-</td>
<td>350-359</td>
<td>(70-71.9%)</td>
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<td>D+</td>
<td>335-349</td>
<td>(67-69.9%)</td>
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<td>D</td>
<td>300-334</td>
<td>(60-66.9%)</td>
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<td>F</td>
<td>0-299</td>
<td>(0% to 59.9%)</td>
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**Assignments** 150 points  
**Exam 1** 100 points  
**Final Exam** 100 points  
**Research Paper** 100 points  
**Research Presentation** 50 points  
**Total** = **500 points**
COURSE SYLLABUS

Complete all readings by the adjacent date. Most listed readings are from the required texts: Palmore and Gardner is abbreviated as PG; Preston, Heuveline and Guillot is abbreviated as H. Specific information about assignments and some supplementary readings is not provided here. We will average about one assignment per week during the semester.

Week One: Introduction

   August 30   Readings: None

Week Two: Basic Measures of Demographic Change

   September 6  Readings: PG, chapter 1 (all); H, chapter 1 (all)

Week Three: Age-Specific Rates and Age Standardization

   September 13  Readings: PG, chapter 2, pp. 9-34; H, chapter 2 (all)

Week Four: The Life Table, Part I

   September 20  Readings: PG, chapter 2, pp. 35-61; H, chapter 3, pp. 38-53

Week Five: The Life Table, Part II

   September 27  Readings: H, chapter 3, pp. 53-70

Week Six: Research Proposal Presentations and Review for Exam 1

   October 4   Readings: none

Week Seven: Exam 1

   October 11   No Class (date for exam 1 to be determined)

Week Eight: Multiple Decrement Processes

   October 18   Readings: H, chapter 4 (all)

Week Nine: Measures of Fertility, Part I

   October 25   Readings: PG, chapter 3, pp. 63-125
Week Ten: Measures of Fertility, Part II and Basic Measures of Migration

November 1  Readings: H, chapter 5, pp. 92-116; migration readings TBA

Week Eleven: Population Projection and Stable Population Models

November 8  Readings: H chapter 6 (all); H chapter 7 (optional)

Week Twelve: Age-Period-Cohort (APC) Models

November 15  Readings:


Week Thirteen: Thanksgiving Break

November 22  No Class

Week Fourteen: An Introduction to Survival Analysis

November 29  Readings: TBA

Week Fifteen: Final Research Presentations and Review for Final Exam

December 6  Readings: none

SOC 6230 Final Exam time and date TBA.