

Demographic Techniques I
Sociology 674
M 9:30-12:00

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Course description: Sociology 674 is an introductory course in demographic research methods. The primary objective of the course is to learn how demographers (1) describe the characteristics of populations; (2) measure mortality, fertility, marriage, and migration; (3) use life tables to estimate population quantities; and (4) project population characteristics into the future. By the end of the semester, you will be able to calculate and correctly interpret standard demographic indices such as expectation of life at birth and total fertility rates. Non-demographic applications of the methods are also stressed where appropriate. This course is a prerequisite for the advanced demographic methods course (Sociology 756) and a key component of preparation for the demography prelim.

Instructional Mode: In person

Credits: 3-credits. This class consists of one 2.5 hour class period each week over the semester and carries the expectation that students will work on course learning activities (reading, writing, problem sets, studying, etc.) for about 3 hours out of classroom for every class period.

Prerequisites: Junior standing and C&E Soc/Soc 357, or graduate student status.

Course requirements: Students are expected to do all assigned readings and to attend class - lectures will address, but will not duplicate, the reading materials. Classes will be interactive lectures and students should come prepared to participate.

Readings and course materials:

I will post lecture notes, homework, and other class materials on the Canvas course website. Readings that are not available via Google Scholar will also be available on Canvas. I will communicate by email regarding any scheduling changes or additional readings.

Required text:

Other readings: We will also read several sections from *Demography: Measuring and Modeling Population Processes* by Preston, Heuveline, and Guillot, 2001, Blackwell (referred to as PHG in the syllabus). This is the main text for the advanced demographic techniques course (Soc. 756) so I would recommend that graduate students buy this book. We will also read several articles from other sources. Readings are available on the Canvas course webpage. Articles marked with (G) are required only for graduate students.

Assessment: There will be four graded components of the course:

1. 10 problem sets

These are assigned to give you practice calculating and interpreting measures as well as applying your knowledge of concepts. These are short assignments that will be due at regular intervals. See the schedule below for due dates. All problem sets are submitted through Canvas.

2. 3 reports

While the problems sets consist of calculations and short-answer questions, the reports give you an opportunity to apply your knowledge as a practitioner. You will be given a problem to address using the methods learned in class and will write a 2-3 page report outlining the problem, findings, and conclusions for a general audience. All reports are submitted through Canvas.

3. 2 tests

The majority of the assignments consist of problem sets and short reports, but there will be 2 tests designed to assess your understanding of the material. These are meant to help you internalize important measures and concepts.

Grades will be determined as follows:

- 1) Problem sets (30%)
- 2) Reports (30%)
- 3) 2 tests (30%)
- 4) Class participation and attendance (10%)

Final grades will be computed as follows: A=92-100, AB=88-91, B=80-87 BC=76-79, C=68-75, D=50-67, F=< 50. I may curve the grades up if necessary, but I never curve down.

Problem set grading:

You are welcome to work together on homework assignments but everyone should write up their own assignments. You should answer all of the problems yourself if you hope to do well on the tests (and in the advanced methods course).

Problem sets are due by midnight on the due date. Homework will be graded on a 4 point scale.

Exemplary assignments will be given “4”s (those that are virtually entirely correct and well-documented), “3”s will be given for good assignments, but which have significant deviations from the “4” standard, and “2”s will be given for poor or incomplete assignments. You may also intermediary grades. If you miss an assignment or turn in an exceptionally poor assignment, you will receive a “0.”

Assignments submitted on time will be given the opportunity to resubmit with corrections for the chance to earn full credit. Doing well in demographic methods requires a meticulous attention to detail, given that calculations are often cumulative. It is more important to me that you learn this material than that you get it right on the first try.

Course schedule:

Week	Date	Content	Assignment
1	1/27	What is demography? Read: Rowland Ch 1 PHG sections 1.1-1.5, 1.9	Problem set #1 due 1/31
2	2/3	Population growth; Age and sex composition Read: Rowland Ch 2 and 3 Elo and Preston “Estimating African-American Mortality from Inaccurate Data” pp 427-441 (G)	Problem set #2 due 2/7
3	2/10	Population comparisons, standardization Read: Rowland sections 4.1-4.3 PHG sections 2.1-2.2 Kitagawa “Standardized Comparisons in Population Research” (G)	Problem set #3 due 2/14 Report #1 due 2/23
4	2/17	Decomposition of differences; Age, period, cohort Read: Rowland section 4.4 PHG section 2.3-2.4 Kitagawa “Components of a Difference Between Two Rates” (G) Ryder “The Cohort as a Concept in the Study of Social Change” (G)	Problem set #4 due 2/21
5	2/24	Measures of mortality and morbidity, introduction to life tables Read: Rowland sections 6.3-6.5, Ch 8 PHG sections 2.5-2.6 Pollard et al Ch 3 “The Life Table” Hummer and Hernandez “The Effect of Educational Attainment on Adult Mortality in the U.S.” (G)	Problem set #5 due 2/28
6	3/3	Life tables part 2 Read: Roberts, Reither, and Lim. “Contributors to Wisconsin’s persistent black-white life expectancy gap” Firebaugh et al. “Why the racial gap in life expectancy is declining in the US” (G)	Problem set #6 due 3/7 Report #2 due 3/23

7	3/10	Healthy life expectancy Read: Robine et al 2007 “Health expectancy Calculation by the Sullivan Method: A Practical Guide” pp. 2-20 Nusselder, “Compression of Morbidity,” pp. 35-58 in Robine et al book	Problem set #7 due 3/14
8	3/17	Exam 1 After exam: Calculating life tables in Stata Read: Blossfeld et al, <i>Event History Analysis with Stata</i> , pp. 38-72	
9	3/24	Spring Break	
10	3/31	Stable and stationary models Read: Rowland Ch 9 Pollard et al Ch 4 “Applications of Stationary Population Models” Hacker, “Decennial Life Tables for the White Population of the United States, 1790-1900” (G)	Problem set #8 due 4/4
11	4/7	Measures of fertility, marriage, and divorce Read: Rowland section 7.3-7.4, 7.7-7.8 Kennedy and Ruggles “Breaking up is Hard to Count” (G)	Problem set #9 due 4/11
12	4/14	Migration Read: Rowland Ch 11 Johnson and Lichter “Diverging Demography: Hispanic and Non-Hispanic Contributions to U.S. Population Redistribution and Diversity”	Problem set #10 due 4/18
13	4/21	Population projections Read: Rowland Ch. 12	Report #3 due 5/4
14	4/28	More population projections	
Finals Week	5/7	Exam 2 5:05-7:05 pm	

Usage of Audio Recorded Lectures Statement

Lecture materials and recordings for SOC 674 are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

Accommodations. The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Please send the instructor an email by the end of the second week of the course if you are eligible for special arrangements or accommodations for testing, assignments, or other aspects of the course. This may be the case if English is your second language or you experience a physical or psychological condition that makes it difficult for you to complete assignments and/or exams without some modification of those tasks. Accommodations are provided for students who qualify for disability services through the [McBurney Center](#). Their website has detailed instructions about how to qualify: <http://www.mcburney.wisc.edu/>. Provide a copy of your accommodations request (VISA) to the instructor by the end of the second week of class. We try to reserve rooms and proctors by the third week in class, so we must know of all accommodations by then. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

If you wish to request a scheduling accommodation for religious observances, send an email by the end of the second week of the course stating the specific date(s) for which you request accommodation; campus policy requires that religious observances be accommodated if you make a timely request early in the term. See the university's [web page](#) for details: <https://kb.wisc.edu/page.php?id=21698>.

Sexual harassment and misconduct. Professional conduct and appropriate behavior are critical to create a safe learning environment for students and instructors alike. Here is a statement about sexual harassment from the University:

What is Sexual Harassment?

Unwelcome sexual advances, requests for sexual favors, and verbal or physical conduct of a sexual nature constitute sexual harassment when:

- submission to such conduct is a condition of employment, academic progress, or participation in a university program; or
- submission to or rejection of such conduct influences employment, academic or university program decisions; or
- the conduct interferes with an employee's work or a student's academic career, or creates an intimidating, hostile or offensive work, learning, or program environment.

Tangible Action or Quid Pro Quo (This for That) Sexual Harassment and Hostile Environment Sexual Harassment are both illegal and unacceptable.

One practical implication is that instructors (faculty or graduate students) may not date students to whom they will be assigning grades. If you believe that you have been harassed, contact your instructor or the chair of the Department of Sociology (socchair@ssc.wisc.edu).

Academic integrity. By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to studentconduct.wiscweb.wisc.edu/academic-integrity/.

According to UWS 14, academic misconduct is defined as:

- Seeks to claim credit for the work or efforts of another without authorization or citation;
- uses unauthorized materials or fabricated data in any academic exercise; [L] [SEP]
- forges or falsifies academic documents or records; [L] [SEP]
- intentionally impedes or damages the academic work of others; [L] [SEP]
- engages in conduct aimed at making false representation of a student's academic performance; [L] [SEP]
- assists other students in any of these acts. [L] [SEP]

For a complete description of behaviors that violate the University's standards as well the disciplinary penalties and procedures, please see the Dean of Students [website](#). If you have questions about the rules for any of the assignments or exams, please ask your instructor.

Institutional statement on diversity: Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world. <https://diversity.wisc.edu/>

Departmental notice of grievance and appeal rights. The Department of Sociology regularly conducts student evaluations of all professors and teaching assistants near the end of the semester. Students who have more immediate concerns about this course should report them to the instructor or to the chair, 8128 Social Science (socchair@ssc.wisc.edu).

Department learning objectives. Beyond the specific substantive and methodological content I will cover in this course, I have designed this course to achieve the following instructional objectives designated as priorities by the Department of Sociology:

- *Critically Evaluate Published Research.* Sociology graduates will be able to read and evaluate published research as it appears in academic journals and popular or policy publications.
- *Critical Thinking about Society and Social Processes:* Sociology graduates can look beyond the surface of issues to discover the "why" and "how" of social order and structure and consider the underlying social mechanisms that may be creating a situation, identify evidence that may adjudicate between alternate explanations for phenomena, and develop proposed policies or action plans in light of theory and data.
- *See Things from a Global Perspective:* Sociologists learn about different cultures, groups, and societies across both time and place. They are aware of the diversity of backgrounds and experiences among residents of the United States. They understand the ways events and processes in one country are linked to those in other countries.
- *Prepare for Graduate School and the Job Market:* Students use their social research skills to identify opportunities for employment or further study, assess their qualifications for these opportunities, and identify strategies for gaining the necessary knowledge and experience to improve their qualifications. Students are encouraged to develop and maintain portfolios of their written work and educational experiences to aid them in preparing applications.
- *Improve Project Management Skills:* Students will improve their skills in time management, ordering and executing a series of complex and inter-related tasks, and integrating distinct components of a project into a final product.