

Sociology 674

Demographic Techniques I

Time: Tues/Thurs 4:00-5:15

Classroom: 4308 Sewell Social Science Building

Instructor: Jim Raymo

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Office hours: Mondays 4-5 pm, or by appointment

Course objectives:

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.

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.

There will be three types of graded assignments:

1. 8 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.

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.

3. 3 tests

The majority of the assignments consist of problem sets and short reports, but there will be 3 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 (20%)
- 3) 3 tests (45%)
- 4) Class participation and attendance (5%)

Grades will be assigned as follows based on the average score for all assignments: 90-100 = A, 85-89 = AB, 75-84 = B, 70-74 = BC, 60-69 = C, 50-59 = D, < 50 = F.

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 the *beginning* of class on the due date. Individual assignments will not be graded and you will receive credit for submitting your answers to the problem sets. Annotated answer sheets will be posted on the Learn@UW page and it is your responsibility to check your own answers against those posted by the instructor. It is also your responsibility to confer with classmates, contact the instructor, or come to office hours for assistance if you do not understand any part of an assignment. You will not receive credit for assignments submitted after the due date.

Other relevant information:

I will communicate by email regarding any scheduling changes or additional readings. I will post all class materials on the course website at Learn@UW.

Accommodations. 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.

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>

Academic honesty. As with all courses at the University of Wisconsin, you are expected to follow the University's rules and regulations pertaining to academic honesty and integrity. The standards are outlined by the [Office of the Dean of Students](#) at <http://www.students.wisc.edu/doso/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;
- forges or falsifies academic documents or records;
- intentionally impedes or damages the academic work of others;
- engages in conduct aimed at making false representation of a student's academic performance;
- assists other students in any of these acts.

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 or one of the TAs.

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 (Pamela.oliver@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.

Readings:

Required text: *Demographic Methods and Concepts* by Donald T. Rowland (2003, Oxford University Press). This book is available at UBS. The book comes with a CD that we will be using occasionally. Make sure that you have both the book and the CD.

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. These readings are all available on Learn@UW (indicated by *).

	Date	Topic and assignment
TR	3-Sep	<i>Introduction, syllabus</i>
		I. Population composition & growth
T	8-Sep	<i>Basic concepts: Rates and probabilities</i> Read: Rowland section 1.4-1.6 PHG sections 1.1 - 1.5, 1.9* McFalls "Population: A Lively Introduction"*
TR	10-Sep	<i>Population growth</i> <u>Problem set 1 due</u> Read: Rowland Chapter 2
T	15-Sep	<i>Age & sex composition</i> Read: Rowland Chapter 3 Haub and Gribble "The World at 7 Billion"*
TR	17-Sep	<i>Basic concepts: Age, period, and cohort</i> <u>Problem set 2 due</u> Read: Rowland section 4.4 PHG section 2.4-2.5* Ryder "The Cohort as a Concept in the Study of Social Change"*
T	22-Sep	<i>Population comparisons, standardization</i> <u>Report #1 due: Age & sex composition</u> Read: Rowland 120-134, PHG section 2.1-2.2* Kitagawa "Standardized Comparisons in Population Research"*

TR 24-Sep *Decomposition of differences between rates & means*
Problem set 3 due
 Read:
 PHG pp. 28-30*
 Kitagawa “Components of a Difference Between Two Rates”*

T 29-Sep No class today

TR 1-Oct *Demographic data: Census, vital statistics, and other sources of data*
 Read:
 Rowland 24-29
 Mather et al. “The American Community Survey”*

II. Measures of mortality, fertility, reproduction, & marriage

T 6-Oct *Measures of mortality and morbidity*
Problem set 4 due
 Read:
 Rowland sections 6.3-6.5
 Hummer and Hernandez “The Effect of Educational Attainment on Adult Mortality in the U.S.”*

TR 8-Oct *Measures of fertility*
 Read:
 Rowland 7.3-7.4

T 13-Oct *Measures of reproduction: NRR, GRR, TFR*
Problem set 5 due
 Read:
 Rowland sections 7.5-7.6
 Kohler et al. “The Emergence of Lowest-Low Fertility in Europe during the 1990s”*

TR 15-Oct *Measures of marriage & divorce*
 Read:
 Rowland sections 7.7-7.8
 Retherford et al. “Late Marriage and Less Marriage in Japan”*

T 20-Oct ***Test 1***

III. Life tables

TR 22-Oct *Life tables*
 Read:
 Rowland Chapter 8
 Pollard et al. Chapter 3 “The Life Table”*

T	27-Oct	<i>More on life tables</i> <u>Problem set 6 due</u> Read: PHG chapter 3 (skip sections 3.7-3.9)* Firebaugh et al. "Why the racial gap in life expectancy is declining in the United States"*
TR	29-Oct	<i>Life tables for other events</i> Read: Pollard et al. Chapter 4 "Applications of Stationary Population Models"*
T	3-Nov	<i>Life tables: Applications</i> <u>Problem set 7 due</u>
TR	5-Nov	<i>Life tables: Multiple decrement and multi-state</i> Read: Hayward et al. "The Retirement Process among Older Women in the United States Changes in the 1970s"*
T	10-Nov	<i>Demography of the family</i> <u>Report #2 due: Life tables</u> Read: Kennedy and Bumpass "Cohabitation and Children's Living Arrangements: New Estimates from the United States"*
TR	12-Nov	Test 2
IV. Migration and population projections		
T	17-Nov	<i>Migration: concepts, data, rates</i> Read: Rowland Chapter 11 Passel "Unauthorized Migrants in the United States: Estimates, Methods, and Characteristics"*
TR	19-Nov	<i>Population projections</i> Read: Rowland Chapter 12
T	24-Nov	<i>More on population projections</i> Read: O'Neill and Balk "World Population Futures"* <u>Problem set 8 due</u>
TR	26-Dec	<i>Thanksgiving break – no class</i>
T	1-Dec	<i>Socioeconomic projections</i> Read: Hermalin, Ofstedal, and Tesfai "Future Characteristics of the Elderly in Developing Countries and Their Implications for Policy"*

- TR 3-Dec *Guest lecture – Professor Eva DuGoff*
“Multistate life tables for morbidity”
Read: Lubitz et al. “Health, Life Expectancy, and Health Care Spending among the Elderly”*
Report #3 due: Population projections
- T 8-Dec *Guest lecture – Professor Christine Schwartz*
“Examples of standardization and decomposition methods”
Read: Schwartz and Mare “The Proximate Determinants of Educational Homogamy: The Effects of First Marriage, Marital Dissolution, Remarriage, and Educational Upgrading”*
- TR 10-Dec *Guest lecture – David Egan-Robertson*
Title: TBA
Read: TBA
- T 15-Dec **Test 3**