

PubH 6780, Section 220
Data to Drive Public Health
Fall Semester 2016

(updated 8/25/16)

Credits:	2
Meeting Days:	In-Person September 14-17, 2016 and Online at http://moodle.umn.edu
Meeting Time:	Varies
Meeting Place:	Coffman Memorial Union 319 and Campus Club Room C
Instructor:	Pinar Karaca-Mandic, PhD
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I. Course Description

There is a wealth of publicly available demographic data in the United States that can be used for policy analysis. The goal of this course is to provide students the skill set needed to pose researchable policy questions, locate existing demographic data to answer the questions, turn the data into a usable file format, understand the data documentation, analyze the existing data appropriately, and communicate the findings in a manner consistent with the standards of the professional policy community. Applied health and social policy topics may include health insurance coverage, health care access, demographic trends, public program participation, public program eligibility, health surveillance among many others.

Students will learn to develop empirically researchable policy questions, seek out sources of potential existing data, and refine the questions so they can be answered by using existing data sources. In order to analyze policy questions using available demographic data, students will also learn about actual demographic survey designs, survey data processing, and survey data structures that the major demographic surveys use. Many of these technical demographic data issues pose real problems in carrying out the research and must be dealt with in order to produce an appropriate analysis. By the end of the course each student will have developed researchable policy questions, carried out the appropriate analysis to answer the questions, produced high quality analytical tables, and written up descriptions of the methods used to produce the numbers in the tables in a style that is consistent with professional policy research.

Who should take this course:

This course is targeted to students interested in obtaining skills for developing policy-relevant research questions that can be answered by using existing demographic data for empirical evidence. Students may use this course to develop analytic projects that will assist them in meeting Master's or Ph.D. research requirements.

II. Course Prerequisites

Basic graduate level statistics course (can be taken concurrently).

III. Course Goals and Objectives

Specific Skills Students Will Acquire

1. Identification of publicly available demographic data sets to answer policy relevant questions
2. Produce national, state, or county level estimates using publicly available demographic data sets
3. Development of a research question that can be answered with available data.
4. Critical review of the quantitative research of others who use available data.
5. Perform analysis on the National Health Interview Survey, American Community Survey data using the online tool.
6. Produce journal-quality data tables from publicly available data.
7. Produce journal-quality written description of methodology used to develop tables.

IV. Methods of Instruction and Work Expectations

The class will be run with a mixture of lecture, discussion and computer work (about 20% lecture, 70% hands on computer assignments, and about 10% group discussion). All three are essential for students to gain the skills and knowledge necessary to work with publicly available demographic data. Students will learn directly from the instructors and from one another how to solve their analysis problems.

V. Course Text and Readings

Required Software:

Students must have access to a computer with access to web browser and excel

Optional/Helpful Textbooks (Not required)

- 1) Lawrence W. Neuman. Social Research Methods, Qualitative and Quantitative Approaches, Fifth Edition
Chapter 8: Sampling Techniques
Chapter 10: Survey Research (more focused on survey design)
Chapter 12: Analysis of Quantitative Data (univariate and multivariate methods)

- 2) Eun Sul Lee and Ronald N. Forthofer. Analyzing Complex Survey Data. Second Edition. Series: Quantitative Applications in the Social Sciences. Sage Publications, 2005
Covers topics such as: Sampling Techniques, Weights, Variance Estimation, Descriptive Analysis, Linear Regression Analysis, Logistic Regression Analysis

<http://www.sagepub.com/textbooksProdDesc.nav?prodId=Book226358&currTree=Courses&level1=Course1007&>

- 3) Risto Lehtonen and Erkki Pahkinen. Practical Methods for Design and Analysis of Complex Surveys. Second Edition. John Wiley & Sons, Ltd. 2004

Covers topics such as:

- a) Sampling Techniques
- b) Imputation

- c) Variance Estimation
- d) Analysis of Tabulated Data, Multivariate Analysis

VI. Course Outline/Weekly Schedule

Lesson	Assignment	Online Posting Date	Class Topic	Assignment Due Date
1 (online) 09/06/2016	Please complete online lesson 1		Course Overview	09/13/2016
2 (online) 09/06/2016	Please complete online lesson 2		Personal Intro of the Instructor	09/13/2016
3 (in-class) 10 am-noon 9/14/2016			Research Questions, Understanding data design/sampling	
4 (in-class) 1 pm-3 pm 9/14/2016			Introduction to Complex Data, Survey Weights, Univariate Analyses	
5 (in-class) 8:30 am-10 am 9/15/2016	Guest Lecturer, (8:30-9:00 am) Joanna Turner, MS, SHADAC		Generating State-Level Estimates: SHADAC Data Center	
6 (in-class) 10:30 am-noon 9/15/2016			Generating State-Level Estimates: RWJ DataHub	
7 (in-class) 8:30 am-10 am 9/16/2016	Guest Lecturer, Julia Drew, PhD Minnesota Pop. Center		Generating customized tabulations and statistical testing from the National Health Interview Survey using the online tool through Integrated Health Interview Series (IHIS)- An introduction	
8 (in-class) 10:30 am-noon 9/16/2016			In-Class Exercise using the National Health Interview Survey online tool through Integrated Health Interview Series (IHIS)	
9 (in-class) 8:30 am-9:15 am 9/17/2016			Generating County-Level Estimates: County Health Rankings	
10 (in-class) 9:30-noon 9/17/2016			Generating County-Level Estimates: American Fact Finder (American Community Survey)	
Assignment	Mini-Case 1	09/06/2016		10/03/2016
Assignment	Paper 1: Background Paper	09/06/2016		10/10/2016
Assignment	Mini-Case 2	10/03/2016		10/24/2016
Assignment	Paper 2: Paper on Data Source,	10/10/2016		10/31/2016

	Sampling, Methods			
Assignment	Paper 3: Paper on Results and Discussion	10/31/2016		12/05/2016

VII. Evaluation and Grading

Course Projects

Students will complete a series of mini-cases and short papers and data tables that present empirical data informing a specific policy-relevant research question using the Integrated Public Use Microdata Series (IPUMS) online tabulator tools or the Integrated Health Interview Series (IHIS) online tool. Some examples of IPUMS supported data sets include IPUMS-USA (based on the American Community Survey) and IPUMS-CPS (based on the Current Population Survey).

More information can be found at: <https://www.ipums.org/>

For IPUMS-USA: <https://usa.ipums.org/usa/>

For IPUMS-CPS: <https://cps.ipums.org/cps/>

For IHIS: <https://ihis.ipums.org/ihis/>

The mini-cases will be short assignments to help you formulate hypotheses and conduct statistical exercises using the online data tools. The short papers will build off one another to form the core of an empirical research paper or report. Each paper will be organized and formatted in accordance with the criteria specified in the relevant assignment and the style guide presented in the *National Center for Educational Statistics Statistical Standards* (2002). Revised versions of all preceding sections are to be turned in with each new section. The goal of this project is to have a fully assembled empirical research paper or report that could be submitted to a journal for publication.

Students will be evaluated as follows:

1. **Two mini-cases** using online tabulators (15% each, **30%** in total)
2. **Three papers** representing an empirical research study's components. Each paper should have 1-inch margins, use 11-point Arial or 12-point Times font, and be double-spaced.
 - a. Assignment Paper 1: Background Paper (3-5 pages) define policy issue and research question (**15%**).
 - b. Assignment Paper 2: Revised Assignment 1 plus a description of the data set, variables and analytical framework to be used (**25%**).
 - c. Assignment Paper 3: Revised assignments 1 and 2 plus Results and Discussion (**30%**).

Late work will be docked 10% of the total for each day it is late. Exceptions may be granted by the instructors on a case-by-case basis. The student must contact the instructors *in advance* of the deadline, and the instructors *must agree* that the student's circumstances warrant a new deadline for the student. If you think an excuse may be tenuous, it is. Make every effort to turn assignments in on time.

A 4.000 - Represents achievement that is outstanding relative to the level necessary to meet course requirements

A- 3.667

B+ 3.333

B 3.000 - Represents achievement that is significantly above the level necessary to meet course requirements

B- 2.667

C+ 2.333

C 2.000 - Represents achievement that meets the course requirements in every respect

C- 1.667

D+ 1.333

D 1.000 - Represents achievement that is worthy of credit even though it fails to meet fully the course requirements

S Represents achievement that is satisfactory, which is equivalent to a C- or better.

For additional information, please refer to:

<http://policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html>.

Course Evaluation

The SPH will collect student course evaluations electronically using a software system called CoursEval: www.sph.umn.edu/courseeval. The system will send email notifications to students when they can access and complete their course evaluations. Students who complete their course evaluations promptly will be able to access their final grades just as soon as the faculty member renders the grade in SPHGrades: www.sph.umn.edu/grades. All students will have access to their final grades through OneStop two weeks after the last day of the semester regardless of whether they completed their course evaluation or not. Student feedback on course content and faculty teaching skills are an important means for improving our work. Please take the time to complete a course evaluation for each of the courses for which you are registered.

Incomplete Contracts

A grade of incomplete "I" shall be assigned at the discretion of the instructor when, due to extraordinary circumstances (e.g., documented illness or hospitalization, death in family, etc.), the student was prevented from completing the work of the course on time. The assignment of an "I" requires that a contract be initiated and completed by the student before the last official day of class, and signed by both the student and instructor. If an incomplete is deemed appropriate by the instructor, the student in consultation with the instructor, will specify the time and manner in which the student will complete course requirements. Extension for completion of the work will not exceed one year (or earlier if designated by the student's college). For more information and to initiate an incomplete contract, students should go to SPHGrades at: www.sph.umn.edu/grades.

University of Minnesota Uniform Grading and Transcript Policy - A link to the policy can be found at onestop.umn.edu.

VIII. Other Course Information and Policies

Grade Option Change (if applicable)

For full-semester courses, students may change their grade option, if applicable, through the second week of the semester. Grade option change deadlines for other terms (i.e. summer and half-semester courses) can be found at onestop.umn.edu.

Course Withdrawal

Students should refer to the Refund and Drop/Add Deadlines for the particular term at onestop.umn.edu for information and deadlines for withdrawing from a course. As a courtesy, students should notify their instructor and, if applicable, advisor of their intent to withdraw.

Students wishing to withdraw from a course after the noted final deadline for a particular term must contact the School of Public Health Office of Admissions and Student Resources at sph-ssc@umn.edu for further information.

Student Conduct Code

The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community.

As a student at the University you are expected adhere to Board of Regents Policy: *Student Conduct Code*. To review the Student Conduct Code, please see:

http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf.

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

Use of Personal Electronic Devices in the Classroom

Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. To this end, the University establishes the right of each faculty member to determine if and how personal electronic devices are allowed to be used in the classroom. For complete information, please reference:

<http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html>.

Scholastic Dishonesty

You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. (Student Conduct Code:

http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf) If it is determined that a student has cheated, he or she may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see:

<http://policy.umn.edu/Policies/Education/Education/INSTRUCTORRESP.html>.

The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: <http://www1.umn.edu/oscai/integrity/student/index.html>. If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

Makeup Work for Legitimate Absences

Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances. Such circumstances do not include voting in local, state, or national elections. For complete information, please see:

<http://policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html>.

Appropriate Student Use of Class Notes and Course Materials

Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes beyond the classroom community or accepting compensation for taking and distributing classroom notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community. For additional information, please see: <http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html>.

Sexual Harassment

"Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the University setting. For additional information, please consult Board of Regents Policy:

<http://regents.umn.edu/sites/default/files/policies/SexHarassment.pdf>

Equity, Diversity, Equal Opportunity, and Affirmative Action

The University will provide equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status,

veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy:
http://regents.umn.edu/sites/default/files/policies/Equity_Diversity_EO_AA.pdf.

Disability Accommodations

The University of Minnesota is committed to providing equitable access to learning opportunities for all students. Disability Services (DS) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact DS at 612-626-1333 to arrange a confidential discussion regarding equitable access and reasonable accommodations.

If you are registered with DS and have a current letter requesting reasonable accommodations, please contact your instructor as early in the semester as possible to discuss how the accommodations will be applied in the course. For more information, please see the DS website, <https://diversity.umn.edu/disability/>.

Mental Health and Stress Management

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website: <http://www.mentalhealth.umn.edu>.

The Office of Student Affairs at the University of Minnesota

The Office for Student Affairs provides services, programs, and facilities that advance student success, inspire students to make life-long positive contributions to society, promote an inclusive environment, and enrich the University of Minnesota community.

Units within the Office for Student Affairs include, the Aurora Center for Advocacy & Education, Boynton Health Service, Central Career Initiatives (CCE, CDes, CFANS), Leadership Education and Development –Undergraduate Programs (LEAD-UP), the Office for Fraternity and Sorority Life, the Office for Student Conduct and Academic Integrity, the Office for Student Engagement, the Parent Program, Recreational Sports, Student and Community Relations, the Student Conflict Resolution Center, the Student Parent HELP Center, Student Unions & Activities, University Counseling & Consulting Services, and University Student Legal Service. For more information, please see the Office of Student Affairs at <http://www.osa.umn.edu/index.html>.

Academic Freedom and Responsibility: for courses that do not involve students in research

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.*

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

* Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students". Template update 9/2014