

INTRODUCTION TO STATISTICAL THINKING IN SOCIOLOGY (SOCIOLOGY 261, Section 402)

This course satisfies the GER Quantitative Literacy B (QL-B) requirement. It is also required for the BA in Sociology and the BS in Criminal Justice, and can be used for the introductory statistics requirement in the Quantitative Social Data Analysis (QSDA) certificate program.

Lecture - M/W: Noon-12:50 pm, Bolton Hall B56

Lab section - **either** section 801 (W: 1:00 pm to 1:50 pm, Mitchell 353) or 802 (W: 2:00pm to 2:50pm, Mitchell 353)

Instructor: Dr. Aki Roberts

Email: aki@uwm.edu (the best way to reach me)

Office: BOL 740

Office Phone: (414) 229-6943

Office Hours: M, 4:30 pm to 6:30 pm or by appointment

Lab Teaching Assistant: Hannah Rowe Smith (Lab 801 and 802)

Email: smit2788@uwm.edu

Office: BOL 729

Office hours: Th, 10:00 am to noon or by appointment

Prerequisites: A satisfactory grade in GER Quantitative Literacy A (QL-A) is required (such as Math 102, 103, 105, 108, or 111). Sociology 101 OR sophomore standing is also a formal prerequisite. The course involves lots of arithmetic and symbols and some algebra.

Subject: Introduction to data analysis in sociological research. Students will learn a lot of "statistics", but with the intent of using and interpreting the statistics in addressing sociological questions. Students will learn how to calculate various statistics both with a hand calculator and with SPSS software, and will learn how to interpret the statistics. The course will include both lectures and computer labs. Lectures focus on fundamental ideas in statistics, calculation of statistics using a calculator, and interpretation of the resulting numbers. Labs focus on calculation of statistics using SPSS software as well as interpretation of the resulting output. (Please see the information regarding SPSS software and how to access it, etc., below.)

Optional Textbook: We will mainly rely on class notes, but students who want to can purchase *Social Statistics for a Diverse Society* by Frankfort-Nachmias and Leon-Guerrero, Pine Forge Press (ISBN 148333354X). The book is on UWM library reserve, too.

Labs: Attendance at a lab section is required (Section 801 or 802). The main purpose of the labs will be to teach students how to use SPSS software. The lab TA (Hannah) will also elaborate on lecture materials (including giving more examples), go over lecture homework (after assignments are due), and can help you with hand-calculation questions.

Homework: There will be 8 homework assignments.

-Lab (SPSS) homework: 3 lab homework assignments during the semester will require calculation of statistics in SPSS and interpretation of results. Lab (SPSS) homework will be collected in the lab sessions. Late assignments will not be accepted.

-Lecture (hand-calculation) homework: There will be 5 hand-calculation homework assignments. These will be collected at lecture. Late assignments will not be accepted.

I will post homework solutions (after the due date) on Canvas. However, to encourage attendance the actual homework questions will be distributed only in class or in lab and will not be posted on Canvas. Students will be given at least one week to complete each homework assignment.

Exams: There will be three non-cumulative exams (each with about 3 or 4 hand-calculation and interpretation problems). Exam dates (subject to change) are 2/26/20 for Exam 1, 4/8/20 for Exam 2, and 5/11/20 (12:30-2:30 pm, from the UWM final exam schedule) for Exam 3. The exams **will not** include any questions on how to use SPSS.

Makeup Exams: Makeups are discouraged. Sometimes, however, they are necessary due to student or family illness or some other emergency.

Illness and other emergencies

Makeup exams and assignments are allowed in the case of illness or some other emergency (for example, jury duty, death in the family, military service). To be considered for makeup exams and assignments, the student must present appropriate documentation (such as a doctor's note, obituary, a letter from judge, military orders). Please note that not all possible reasons for a makeup will be accepted (for instance, a family vacation is not an acceptable reason).

Religious observances

Makeup exams and assignments are allowed in the case of religious observances. The university policy requires students to notify the instructor, within the first three weeks of the beginning of classes (within the first week of summer session and short courses), of the specific days or dates on which he or she will request relief from an examination or academic requirement.

Calculator: The homework exercises and exams will require an inexpensive calculator that can add, subtract, multiply, divide, and take square roots. Bring a calculator to every class (and to exams). Cellphone calculators cannot be used under any circumstances.

Attendance: Attendance in class is required.

Class Manners: Do not be late to class nor leave early. Students who arrive late to an exam will not be allowed to take that exam. Do not talk to classmates during class. Do not take cellphones or any other electronic device (other than a calculator) out of your pocket/purse/backpack during class, except in the case of accommodation for disability. Do not engage in other disruptive behavior (e.g. repeatedly asking administrative questions that are covered on the syllabus). There will be three stages of addressing problem behavior in class:

First stage – The student is given a verbal warning.

Second stage – If the student does not correct his/her behavior after the initial verbal warning, 30 points will be taken from one of the exam scores.

Third stage – If the student does not correct his/her behavior after the point reduction, he/she will be dropped from the course.

Working Together: Students are allowed to get help from each other on homework, but **cannot** copy each other's answers (resulting in identical wording, duplication of unique calculation mistakes, etc...). This is considered **plagiarism**. All students involved in this kind of plagiarism will receive an F for their course grade and will be reported to the appropriate University authorities.

Academic Misconduct: Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Policies for addressing students cheating on exams or acts of plagiarism can be found at the following: <http://www4.uwm.edu/osl/dean/conduct.cfm>. According to

UWM policy, I am required to report all suspicious cases to the Dean of Students Office. Sanctions for academic misconduct include an F grade for the course, removal from the course, and academic probation and suspension.

Estimated Time Commitment: It is expected that students will spend about 10 hours per week completing work related to this course. On average over the semester, students will spend 2 ½ hours in lecture or lab (37.5 hours total for a 15-week semester, 40 hours total for a 16-week semester), about 2 ½ hours reading the text and reviewing class notes (37.5 hours total for a 15-week semester, 40 hours total for a 16-week semester), and about 5 hours working on assignments (75 hours total for a 15-week semester, 80 hours total for a 16-week semester). The course requires 150 hours of total time commitment for a 15-week semester and 160 hours of total time commitment for a 16-week semester.

Grading: Final course grades are based on overall scores calculated by weighting different graded elements as follows:

1 st Exam: 20%
2 nd Exam: 20%
3 rd Exam: 20%
Lab (SPSS) homework (assigned and due in labs): 15%
Lecture (hand-calculation) homework (assigned and due in lecture): 25%

There is no separate letter grade for lab - your course grade will apply to all 3 credits.

Letter Grade Conversion

- A (94-100)
- A- (90-93)
- B+ (87-89)
- B (83-86)
- B- (80-82)
- C+ (77-79)
- C (73-76)
- C- (70-72)
- D+ (67-69)
- D (60-66)
- F (0-59)

Course Schedule

- The What and the Why of Statistics (Chapter 1)
- Organization of Information (Frequency Distributions) (Chapter 2)

Lecture HW 1

- Measures of Central Tendency (Chapter 4)
- Measures of Variability (Chapter 5)

Lecture HW 2

Lab HW 1

- Introduction to Probability (relies on class notes)
- Discrete Probability Distributions (relies on class notes)

Exam 1 –2/26/20 (subject to change)

- The Normal Distribution (Chapter 6)

Lecture HW 3

Lab HW 2

- Sampling and Sampling Distributions (Chapter 7)

Lecture HW 4

- Testing Hypotheses (Chapter 9)

Exam 2 – 4/8/20 (subject to change)

Testing Hypotheses (Chapter 9)

Regression and Correlation (Chapter 13)

Lecture HW 5

Lab HW 3

Exam 3 – 5/11/20

IBM SPSS Software

SPSS is a statistical software program that calculates statistics from a data set. SPSS is a good skill to learn, and is used in various fields including social sciences, business, health, criminal justice, and social work. In fact SPSS skills are more unique, and therefore potentially more marketable, than Excel skills.

While usage of this program is mandatory for this course, you do not need to purchase this program if you are willing to use computers in the Bolton 225 lab or in the Library Learning Commons (note that not all the computer labs on campus may not have SPSS). For hours and locations, see <https://uwm.edu/technology/ccls/>

Otherwise, you can purchase access to the program for six months at quite a low price (around \$50). Contact me or the TA if you decide to purchase SPSS.

UNIVERSITY AND SOCIOLOGY DEPARTMENT POLICIES

The Secretary of the University maintains a web page that contains university policies that affect the instructor and the students in this course, as well as essential information specific to conduct of the course. The link to that page is: http://www4.uwm.edu/secu/news_events/upload/Syllabus-Links.pdf

Accommodations for Students with Disabilities. In the pursuit of equal access and in compliance with state and federal laws, the University is required to provide accommodations to students with documented disabilities. It is expected that a statement be placed on your syllabus informing students to contact you to arrange needed accommodations. A sample syllabus statement can be found here: <https://uwm.edu/arc/wpcontent/uploads/sites/97/2015/08/Recommended-Syllabus-Statement.pdf>.

Religious Observances. Policies regarding accommodations for absences due to religious observance are found at the following: <http://www4.uwm.edu/secu/docs/other/S1.5.htm>

Students called to active Military Duty. Accommodations for absences due to call-up of reserves to active military duty are found at the following: <https://uwm.edu/active-duty-military/>

Incompletes. You may be given an incomplete if you have carried a course successfully until near the end of the semester but, because of illness or other unusual and substantiated cause beyond your control, have been unable to take or complete the final examination or to complete some limited amount of course work. An incomplete is not given unless you prove to the instructor that you were prevented from completing the course for just cause as indicated above. The conditions for awarding an incomplete to graduate and undergraduate students can be found at the following: https://www4.uwm.edu/secu/docs/other/S_31_INCOMPLETE_GRADES.pdf

Discriminatory Conduct (such as sexual harassment). Discriminatory conduct will not be tolerated by the University. It poisons the work and learning environment of the University and threatens the careers, educational experience and well-being of students, faculty and staff. Policies regarding discriminatory conduct can be found at: https://www4.uwm.edu/secu/docs/other/S_47_Discrimina_duct_Policy.pdf

Academic Misconduct. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Policies for addressing students cheating on exams or plagiarism can be found at the following: <https://uwm.edu/academicaffairs/facultystaff/policies/academic-misconduct/>

Complaint Procedures. Students may direct complaints to the Sociology Department Chair or the Associate Dean for Social Sciences in the College of Letters & Sciences. If the complaint allegedly violates a specific university policy, it may be directed to the Sociology Department Chair, the Associate Dean for Social Sciences in the College of Letters & Sciences, or to the appropriate university office responsible for enforcing the policy. Policies may be found at: https://www4.uwm.edu/secu/docs/other/S_47_Discrimina_duct_Policy.pdf

Grade Appeal Procedures. A student may appeal a grade on the grounds that it is based on a capricious or arbitrary decision of the course instructor. Such an appeal shall follow the established procedures adopted by the department, college, or school in which the course resides or in the case of graduate students, the Graduate School. These procedures are available in writing from the sociology department chairperson or the Academic Dean of the College of Letters & Science. Procedures for undergraduate student grade appeal can be found at:

<https://uwm.edu/letters-science/advising/answers-forms/policies/appeal-procedure-for-grades>

Graduate student grade appeal procedures are at <https://uwm.edu/graduateschool/appealing-academic-decisions/>

Final Examination Policy. Policies on final examinations are at: <http://www4.uwm.edu/secu/docs/other/S22.htm>

Book Royalties. In accord with Department of Sociology policy, the royalties from the sale of faculty-authored books to students in their classes are donated to a UWM Foundation/Sociology Account to support future awards and activities for UWM students in Sociology.