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SOCI 202.50: Social Statistics

Sara Rasch

The University Of Montana, sara.rasch@umontana.edu

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Social Statistics (SOCI 202)

Instructor: Sara S. Rasch

Email: sara.rasch@mso.umt.edu

Office hours: Held through Skype and FaceTime by appointment

COURSE DESCRIPTION AND LEARNING OBJECTIVES

This course is designed to introduce you to basic descriptive and inferential statistical techniques and their application to sociological data. We will explore estimation techniques, hypothesis testing, and measures of association. These skills are required for further study in Sociology. Knowledge of course concepts will allow students to perform basic statistics and analyze information presented in sociological research articles. In addition, the information gained will provide a foundation to understand the statistics often visible in our daily lives (through sources such as newspapers and television).

Learning Objectives:

1. Summarize and describe distributions of scores through the use of visual aids (charts, graphs, and tables) and measures of central tendency and dispersion
 2. Find area under the normal curve and generate confidence intervals.
 3. Test hypotheses from single sample, two-sample, and multiple sample designs.
 4. Use non-parametric statistics to evaluate research hypotheses.
 5. Use correlation and bivariate regression to make estimates and inferences.
 6. Use **statistical software**, and **hand calculations** to conduct analyses.
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REQUIRED MATERIALS

Text: Healey, Joseph. 2012. *Statistics: A Tool for Social Research*. Belmont, CA: Wadsworth Cengage. 9th edition.
ISBN: 978-1-111-18636-4

Software: Access to the Statistical Package for the Social Sciences (**SPSS**)

There are two ways to obtain access. You can either use the labs on campus, or you may purchase a limited software license for six months to be downloaded onto your computer. Information on obtaining access to SPSS will be provided in week 1 content.

Calculator: A scientific calculator is required for this course. A graphing calculator is not necessary.

Document Scanner: You will also need access to a document scanner. You are required to show your handwritten work on exams. Therefore, you will need to do the work on paper, create an electronic PDF version by scanning your work, and submit your document to Moodle. I suggest a free phone app called TurboScan, or you can use a traditional document scanner. **This is an absolute requirement for this class. You must learn how to use one of these scanners before the first exam is due. Inability to scan a document will not be considered a reasonable excuse for a late exam.**

COURSE REQUIREMENTS

Students' final grades will be based on problem sets and exams.

Problem Sets	160 points
<u>Exams (2 @ 150 points)</u>	<u>300 points</u>
Total	460 Points

Plus/minus grading will be used in this class. Based on the number of points achieved, final grades will be assigned as follows:

	A = 428 and greater	A- = 414-427
B+= 405-413	B = 382-404	B- = 368-381
C+= 359-367	C = 336-358	C- = 322-335
D+= 313-321	D = 290-312	D- = 276-289
F = 275 and lower		

Problem Sets

You will be asked to complete seven problems sets throughout the course of this semester. Most of these problem sets will require use of SPSS. All assignments are worth 20 points, except for Assignment #7, which is worth 40 points (you will be working on this assignment for two weeks). All assignments will be due at 11:00pm on the Saturday of the week they are assigned. Further assignment instructions will be given at the beginning of each week. All assignments must be submitted to Moodle as a **PDF** or **Word Document**. The instructor of this course will make all materials for the week available by 11:00pm on the preceding Sunday.

Exams

There will be two exams in this course: a midterm and a final exam. The midterm exam will cover chapters 1-9, and the final exam will be over chapters 10-14. **The exams will require that you show all of your handwritten work.**

I encourage you to complete the problems at the end of each chapter to prepare for your exams. You will not be using SPSS software to complete the exam. While these exams will be open book, and open note, I encourage you to study before taking the exam. You will be required to have an in-depth understanding of when and how to apply statistical techniques.

I will post the exam on Wednesday by 10:00am of the week in which it is due. Exams must be completed, scanned as a **PDF** and submitted to Moodle by 11:00pm on Saturday of the week they are assigned. If a student simply takes pictures of their exam and submits it to Moodle, it will not be accepted. The assignment **MUST** come through as a single, multi-page, **PDF** document. Please see the required materials section of this syllabus for more information on document scanning.

Students must take both exams. Failure to take an exam will result in a failing grade for the course.

Extra Credit

There are no extra credit opportunities available in this course, except for the Fun Quiz in week 1 (See Week 1 Content).

Missed/Late Exams and Assignments

If a student is unable to take an exam at the scheduled time, they must notify the instructor prior to missing the exam. If the student fails to notify the instructor, they will receive a failing grade for that exam. In the case of an illness (verified by a doctor's note) or other documented emergencies, the instructor will make appropriate accommodations for a make-up quiz.

Submit all problem sets and exams on time. No credit will be given for late problem sets or exams.

EXPECTATIONS OF STUDENTS

Course Prerequisites

It is important to understand that even though this is not a designated math course, it does involve math content. The formulas that we will be using will require addition, subtraction, multiplication, division, square roots, and a basic understanding of order of operations. As such, you must have taken some form of college-level linear and probability math (Math 115 or equivalent) before attempting this course. If it has been a long-time since you have had any math, then it will be necessary to review some basic algebraic techniques before you begin.

UMOnline-Moodle

This course requires that you be able to navigate the UMOonline platform-Moodle. I will do my best to make course navigation very clear, but for those with more technical issues, I will be of little help. If you need assistance with this platform, please contact the UMOonline team at umonline-help@umontana.edu, or call 406-243-4999 (866-255-1641- toll free).

The Online Environment

This online format allows you the convenience of taking this course from an environment outside of the physical classroom. This offers certain advantages (i.e. flexibility to work around other commitments; receive feedback from the instructor without being tied to a classroom). However, this environment also requires that you be task oriented and stay on top of assignments and prepare for exams within the limits specified in the course schedule.

Course Schedule

Our weeks for this course will run from Sunday evening to Saturday evening. I will post all course materials on Sunday evening by 11:00pm. All homework assignments and exams are due by the following Saturday at 11:00pm. Please see the course schedule for assignment due dates.

Students with Disabilities

Students with disabilities may request reasonable modifications by contacting me on the first day of class. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. "Reasonable" means the University permits no fundamental alterations of academic standards or retroactive modifications.

Academic Misconduct

All students must practice academic honesty. Cheating and plagiarism will result in a failing grade for the course. In addition, collaboration on assignments and exams is considered academic misconduct and will result in a failing grade for the course. According to the Mansfield library website (2015), "Plagiarism is defined in the UM Student Conduct Code as representing another person's words, ideas, data, or materials as one's own. Consequences include failing an assignment, failing a course, or even expulsion." Attempting to use student assignments or exams from previous semesters does constitute cheating, and will result in a failure of that assignment, and at my discretion, may result in total failure of the course.

Student-instructor Communication

To protect privacy, the instructor of this course is only able to communicate to students through university email. This is your official University of Montana account. I will not reply to any other account with personal information.

When contacting me through email, be professional and courteous. Include the **course number** or **course name** (SOCI 202 or Social Statistics) in the subject line of your email. During the week, I will respond to all emails within 24 hours (it may take me longer to respond on the weekend). It is your responsibility to review the materials and assignments at the beginning of the week and ask questions in a timely manner. If I have not responded within 24 hours, please send me an email at my alternate email address (sarasrasch@gmail.com), as it could be possible that my university email is not working.

If you have general questions about the syllabus, assignments or course content that you think are pertinent to other students, you can post these questions on the Q & A discussion board. If you have a question that only pertains to you, please email me. I will also be available through Skype and FaceTime for individual meetings by appointment.

Student Success Expectations

To be successful in this course, students should:

- Carefully read and print out this syllabus and the course schedule to keep as a reference
- Log on to Moodle and check your email everyday to check for new announcements and content

- Keep up with readings and course content (while the course content for each week will not be posted until Sunday evening, you can start reading the chapters in your text as specified by the course schedule). Complete the readings **before** working on your problems sets.
- Work on the problems at the end of the assigned chapter each week. While you will not be turning these in, they will provide you with necessary practice for the exams. The Healey text provides answers to the odd numbered problems (pages 501-513).
- Draw pictures. For many students the concepts and ideas presented in the course are easier to comprehend when they draw them out in a picture.
- Social Statistics is a course that requires regular studying and attention. Failure to keep up with readings and course work will cause a student to fall behind. If you are doing the work, and still are having problems understanding certain concepts, please contact me. In statistics we learn new concepts by building on previous concepts. It is hard to catch up once you have fallen far behind.
- Maintain contact with the instructor of the course. Do not feel like you are “bothering” me with emails. I encourage communication to ensure that you have a clear understanding of course content and assignments. Be sure to contact me immediately when you are having a problem.

Maternity Leave

It is possible that I may have to take maternity leave at the very end of the semester. In the case that this happens, you will still be responsible for the course content and completing your assignments. The only way that this will affect you is that there may be some delay in grading your final assignments and/or exam.

COURSE CONTENT

Each week I will post a list of content items in a content folder that you should review before completing your Problem Set. The content types are listed below:

Required Reading

Healey, Joseph. 2012. *Statistics: A Tool for Social Research*. Belmont, CA: Wadsworth Cengage. 9th edition.
ISBN: 978-1-111-18636-4

PowerPoint

I will post a PowerPoint presentation each week to highlight certain points in the text. However, it is important to note that the PowerPoint presentation is NOT a substitute for reading the book. I will occasionally add audio to the PowerPoint. If a slide has audio, I will put an asterisk (*) at the end of the title of that slide. If you play that slide as a slideshow (and turn your volume up), you will be able to hear the content.

Video Lectures

From time to time, there may be information that needs to be communicated through a short video. Most of these videos will be available through YouTube. I will provide a YouTube link in the content section each time there is a video lecture.

Problem Examples

I will provide examples, either through video or through PDF documents as to how to complete the statistical techniques by hand each week (except for weeks 1-3).

**** I RESERVE THE RIGHT TO MODIFY THE SYLLABUS AND COURSE SCHEDULE AT ANY TIME. I WILL NOTIFY YOU IF I DO SO.**