Department of Sociology
Sociology 4220:
Computing Applications for the Social Sciences
Winter 2013

Instructor: Brian G. Moss, Ph.D.
Telephone: (248) 942-3086
Office hours: Before/after class or by appointment
E-mail: brian.moss@wayne.edu (*see note below)
Location: 0134 Old Main & Computer Labs in UGL & SEL
Course Times: Tuesday, 5:30pm – 9:10pm

**In the subject line of any e-mail message make reference to SOC 4220 or message will be deleted before review.*

Textbooks Required:

1. Healey, J. *Statistics : A Tool for Social Research*, 9th ed., (bundled with)
2. Kirkpatrick, L & Feeney, B. *A Simple Guide to IBM SPSS® for Versions 18.0 & 19.0*, 11th ed.
   Bundle ISBN-10: 113354083X
   Bundle ISBN-13: 9781133540830

Optional:

3. Healey, J. *Study Guide for Healey's Statistics: A Tool for Social Research*, 9th ed.
   ISBN-10: 1111829810
   ISBN-13: 9781111829810

Other material: 1. Additional readings may be provided throughout the semester.
2. Calculator (should be able to perform basic functions)
3. Statistical Package for the Social Sciences (SPSS) can be downloaded with instructions provided (free).

Course Description:

This course serves as the foundation to conducting research in the social sciences. During the semester, an introduction to the research process will be followed by the fundamental components of accomplishing statistical analyses. Using statistical theories, students will be provided a hands-on approach to understanding the best method to test research hypotheses. Several class periods will provide the opportunity to use statistical software (SPSS) to develop datasets, manage and manipulate data, and analyze interrelationships between variables. This course emphasizes the interpretation of statistical output as it applies to the research question posed.

Specific Knowledge and Skill Objectives:

After completing this course, students should:

1. Understand key elements of the research process.
2. Understand measures of central tendency and variability.
3. Be familiar with the principles of probability.
4. Be able to discuss and apply the characteristics of the normal curve.
5. Be able to describe sampling distributions.
6. Be familiar with elementary descriptive analysis of social research data.
7. Understand the relationship between research question and data analysis.
8. Be able to perform and interpret basic inferential statistical techniques.

Students participating in Sociology 4220 will have an opportunity to develop knowledge and skills related to elementary data analysis. Students will establish a working knowledge of many of the technical and process-oriented issues related to social research. The boundaries of this course are established by the scientific approach to social and behavioral investigation with a focus on the use of the scientific model within sociological research. In addition, the course helps students to understand the role of data within the process of social research and how to minimize potential pitfalls related to the research process.

Course Requirements & Evaluation:

Throughout the semester the course will include lecture material, identified readings, and class discussions. There will be a series of written exercises that encompass various elements of the survey research process. Some of these assignments will be completed independently and some collaboratively. Specific instructions for each assignment will be provided in class with ample time for completion.

All written assignments must be typed and follow the instructions that will be handed out in class. It is expected that coursework be submitted on time. Late coursework will result in the deduction of points. For each day an assignment is late it will lower one full grade or 10%. For example, an assignment due on a Wednesday and not turned in until the following Monday would be five days late and constitute a reduction of 50% of the possible points. Assignments will not be accepted after 5 days from the due date and will result in a score of 0 points.

Students can submit assignments via electronic mail, though links will be made via the Blackboard course site.

Calculation for the final grade will be based on the following assignments:

Assignments	Points
Lab/Class Exercises	150
Examination 1 & 2	200
Total:	350

Final evaluation for the course will be as follows:

Grade	Percentage Range	Grade	Percentage Range
A	95-100	C	73-76.9
A-	90-94.9	C-	70-72.9
B+	87-89.9	D+	67-69.9
B	83-86.9	D	63-66.9
B-	80-82.9	D-	60-62.9
C+	77-79.9	F	0-59.9

Attendance Issues: Attendance will be taken each class. Because of the nature of the class assignments, every absence beyond 2 will lower the final grade by 5% (per absence). Students are responsible for signing the attendance sheet. No one will be allowed to sign in for attendance beyond the actual class meeting.

Students should note that some material presented in class t is not included in the textbook readings and could appear on graded assignments. The instructor does not provide lecture notes. There may also be impromptu in-class assignments for extra-credit points, that will not be reassigned to those not present. Absolutely no other arrangements will be made if a student is absent and one of these opportunities to earn

points toward the final grade was available. This relates to any situation. Do not attempt to turn in missed assignments past the identified due date. They will not be graded. It is to the student's advantage to attend all class sessions.

Those who cannot be present during the mid-term examination period (with a valid reason) will be provided an essay examination in lieu of the standard exam. If a student knows ahead of time of a potential absence, prior arrangements must be made with the instructor to take the essay exam. Or if a student is absent during the midterm examination period he or she must have a valid excuse and must contact the instructor within 24 hours to schedule the essay option. If no contact is made within this time period, no makeup exam will be provided and a score of 0 points will be awarded. There are no alternatives for the final exam. If missed, no alternatives will be made available.

Course Withdrawals: Students are responsible for checking the University's policy for the last day to Withdrawal. After that date students will receive a grade based on their point total for the course. If a student does not officially withdraw from the class he or she will receive a grade reflective of their performance to date out of the total points available for the class. For instance, if only one assignment has been completed the student will only receive those points in relation to the total possible class points. The instructor will not initiate withdrawals.

Incomplete Grades: Only under extreme circumstances will an Incomplete (I) grade be awarded. Incomplete grades will not be considered if the student has not completed almost all of the assignments in the course. If this requirement has not been met the student will receive a grade based on the total points completed at the end of the course. These are awarded only under rare circumstances.

Assignment Format: It is expected that all assignments to be turned in will be typed with normal margins and with a font size equal to or less than 12. Assignments not meeting these requirements will not be accepted or graded. This does not include those impromptu assignments that may be done in class.

Role of the Student: The Wayne State University Statement of Obligations of Students and Faculty Members to the Teaching and Learning Process identifies the roles of students and instructors. Students are expected to participate in class by, (a) contributing to class discussions and small group exercises, (b) sharing their responses to course readings and issues and topics raised in class, (c) asking questions, and (d) completing feedback forms for each classroom session. Do be afraid to ask for help.

Any student formally diagnosed with learning, physical or emotional challenge which requires special accommodation should inform the instructor and contact Educational Accessibility Services, (313) 577-1851, between 8:30 a.m. and 5:00 p.m., Monday through Friday.

Exceptions for any of the aforementioned circumstances are based on instructor discretion (i.e. based on extenuating circumstances) and may require written documentation.

Course Outline: (Tentative and may be adjusted to fit class needs): Readings should be completed prior to the class for which they are scheduled.

Class One	
1-8-2013	**Course Introduction & Requirements**
PART I: FOUNDATIONS FOR TESTING HYPOTHESES Class Two	
1-15-2013	**Introduction & Description Statistics**
Readings	1. Healey (CH 1-2)
Class Three	
1-22-2013	**Central Tendency & Dispersion**
Readings	1. Healey (CH 3-4)
Class Four	
1-29-2013	**Probability & Normal Curve**
Readings	1. Healey (CH 5)
Class Five	
2-5-2013	**EXAMINATION #1**
Class Six	
2-12-2013 (LAB-156, SEL)	**Introduction to Statistical Software (SPSS)**
Readings	1. Kilpatrick (CH 1-6)
	Lab Assignment #1 (**DUE 2-26**)
PART II: INFERENTIAL STATISTICS Class Seven	
2-19-2013	**Samples, Populations & Estimations**
Readings	1. Healey (CH 6-7)
Class Eight	
2-26-2013	**Hypothesis Testing I & II, Means and Proportions**
Readings	1. Healey (CH 8-9)
Class Nine	
3-5-2013 (LAB-156, SEL)	**Application of Statistical Software (SPSS) to test Hypotheses**
Readings	1. Kilpatrick (CH 7-9)
Class Ten	
3-19-2013 (LAB A, UGL)	**Working Lab**
Readings	
Class Eleven	
3-26-2013	**Hypothesis Testing III & IV, ANOVA**
Readings	1. Healey (CH 10)
Class Twelve	
4-2-2013	**Hypothesis Testing IV: Chi-square**
Reading	1. Healey (CH 11)
Class Thirteen	
4-9-2013 (LAB-A, UGL)	**Extending the Analysis of Hypotheses**
Readings	1. Kilpatrick (CH 10-11, 17)
	Lab Assignment #2 (**DUE 4-23**)
Class Fourteen	
4-16-2013 (LAB 156, SEL)	**Working Lab**
Class Fifteen	
4-23-2013	**EXAMINATION #2**

Note 1: Broadcast emails will be sent using students' Wayne State University email address.
Note 2: The optional study guide chapters correspond with the weekly material.