**SOC 3630 – Statistical Analysis of Social Data**
**Spring 2014, Section 002**

**Professor Michael D. Gillespie, Ph.D.**
**Blair Hall 2165: M/W/F: 11:00a–11:50a**
**Lab: 3013 Old Main; F: 2:00p-3:50p**

Office of Statistical Literacy: 3139 Blair Hall
Office Hours: T: 1:00p-4:00p
R: 9:00a-11:00a

Contact: mgillespie@eiu.edu; 581-7107
Java Time! (MLK Union) T: 9:00a-10:00a
(or by appointment)

**COURSE DESCRIPTION AND OBJECTIVES:**

This course is designed to introduce students to the methods that sociologists, social workers, criminologists, and other social scientists use to summarize and analyze relationships in **numerical social data**. Social scientists study individuals through responses to surveys, census demographic indicators, and rates and counts of social behavior (e.g., crime, unemployment, and welfare data). We also use similar data to study aggregate units of analysis such as nations, states, counties, and cities.

This course assumes that each student – on the first day of class – is anxious and *not* seeking to become a professional statistician. Therefore this course is designed to help sociology students develop a *critical statistical literacy*. Fundamentally, you are here in this course to learn *how* statistics are an essential, unavoidable part of our society (and with which you *must* come to some inner-peace).

People who acquire statistical literacy hold a key characteristic of citizenship. The media, politicians, advocates of social causes, and other groups, combine social statistics with textual information to promote and/or justify some social action or cause. To become a critical consumer of statistics, each student will develop a working knowledge of how statistics are generated (computational and applied methods) as well as how "statistics" is a language to communicate certain, purposeful information, and a worldview through which human social relationships are understood.

Student will **create, analyze**, and **communicate** common descriptive and inferential statistics including frequency distributions, graphical presentations of data, measures of central tendency and variation, sampling distributions, estimation procedures, and hypothesis tests.

Specific course objectives include:

- Confront anxieties and fears of working with numbers
- Improve critical thinking and problem solving skills
- Enhance computer skills by using SPSS to manage and analyze data
- Develop competence in reading and using graphs and charts to summarize numerical data
- Develop competence in calculating descriptive and inferential statistics by hand and SPSS
- Develop competence in interpreting descriptive and inferential statistics
- Develop communication and literacy of statistics in order to develop a critical perspective on the widespread use of statistical information in society

By the completion of this course, you will be able to:

- read and analyze statistical information produced by other social researchers
- calculate and apply basic descriptive statistics
- calculate and apply appropriate measures of central tendency and variation
- generate and analyze data using SPSS
- test hypotheses using the appropriate significance tests
- present research results in multiple ways (words, graphics, and tables)
- write about your results in an appropriate manner

**REQUIRED TEXT**:

Healey, Joseph F. 2012. *Statistics: A Tool for Social Research*. 9th ed. Belmont CA: Thompson Wadsworth.

"A Guide for Statistical Literacy: Technical Concepts and Applications" posted on the course D2L site

Required Readings

The weekly reading assignment / schedule will be posted by the prior Wednesday on the course's D2L calendar.

Additional Applied Readings:

An applied reading taken from current media reports, or from a social or political institution, will be posted periodically for use in lecture and/or lab. They are not listed on your course schedule because they are selected a week or two ahead of time to ensure they are timely and relevant.

***You are expected to check the course D2L site to download and read these additional applied required reading assignments.***

For extra help using SPSS, there are 10 copies of the following available for loan in the Office of Statistical Literacy (my office):

Wagner, William (2012). Using IBM SPSS Statistics for Research Methods and Social Science Statistics. 4th ed. Thousand Oaks, CA: Sage.

*These are available on a first-come-first-serve basis; they are available during Prof. G's office hours or by appointment, and in exchange for some meaningful, non-monetary collateral. These are property of the department and MUST be treated with respect. They will not be loaned out for longer than 24 hours at a time.*

Additional Required Items:

1. A Scientific Calculator
   a. *Calculators will be available during lecture and lab sessions;* ***no cell phones/smart phones are allowed to be used as calculators (phones, or personal social media device)***

2. Access to and use of SPSS

   SPSS is available in the Sociology/Anthropology Computer Lab as well as the 3013 Old Main where our lab sessions are held. Campus public computing sites, such as Booth Library or Gregg Technology Center require a course Citrix Account to use SPSS, *which we do not have*. ***It is highly advised you complete all of your SPSS work during the lab period.***

3. Access and knowledge of Desire2Learn (D2L; EIU Online) is important for course announcements, lecture materials, lab and homework assignments, and grade feedback. Additional class materials, if available, will also be posted prior to each class session.

**COURSE REQUIREMENTS: 600 TOTAL POINTS**

Below is a list of the course assignments with total point values and due dates. Each item listed is required. A detailed assignment guide will be provided on D2L.

Graded Requirements:

*Weekly Homework Lab Assignments (12 assignments, 25 points each, 300 total)*:

Each student will complete a series of lab assignments. Every assignment will be posted on D2L by Lab on each Wednesday and is due the following Wednesday ***at the beginning of lecture at 11:00a – not lab***.

*Midterm Exam (75 points)*:

The midterm exam will cover the **first FIVE chapters** of the text and will be on Wednesday March 5, 2014 during the normal class period. The midterm exam will be in two parts: an in-class section of multiple-choice and short answer questions, and a take-home portion of statistical computations and analyses. The take-home portion will be due on Thursday March 6, 2014 by 4pm, in person in the Office of Statistical Literacy.

*Final Exam (125 points)*:

The final exam is Tuesday, May 6, 2014 from 12:30pm-2:30pm. Because statistics is a cumulative process, the final exam is cumulative as well. The final exam will be in two parts: an in-class section of multiple-choice and short answer questions, and a take-home portion of statistical computations and analyses. The take-home portion will be due on Thursday May 8, 2014 by 4:00pm in the Office of Statistical Literacy.

*Analysis Paper (50 points)*:

Each student will complete an analysis of a specific research question using SPSS data See detailed assignment guide on D2L; Due Friday May 2, 2014 ***in class***.

*In-Class Concept Quizzes (10 quizzes, 5 points each, 50 total)*:

10 short-answer, unannounced concept and reading comprehension quizzes will be administered throughout the semester. You must be in class to take the quiz. If you miss a quiz, you are not able to make it up at another time. The quizzes focus on concepts from the reading assignment in the textbook, applied readings, and/or previous lecture topics and lab assignments. *Each quiz is pass/fail meaning you get either all or none of the points, and will consist of no more that two questions at a time*.

*The B.O.S.S. (5-10 extra credit points)*

The B.O.S.S. is the **B**oard **o**f **S**tatistical **S**ignificance, which is located just outside of the Office of Statistical Literacy. From time-to-time, a challenging problem, question, or curiosity will be posted on the B.O.S.S. that, if accepted, each student has the opportunity to attempt for extra credit. When opportunities are posted, they will be announced in class.

*NOTE:* ***NO LATE ASSIGNMENTS WILL BE ACCEPTED****.*

*Every effort should be made to turn in assignments on time. If you know that you will be absent the day an assignment is due, you must email or call my office prior to the start time of the class period (11:00a) and get approval of alternate arrangements to turn submit your assignment. Approval is* **not** *guaranteed.*

Based on the requirements, there are 600 points to be earned in this course:

| Requirement: | Points |
|---|---|
| Weekly Lab Assignments | 300 Total points |
| Midterm Exam | 75 points |
| Final Exam | 125 points |
| Analysis Paper | 50 points |
| Concept / Reading Quizzes | 50 total points |
| | |
| *Total* | 600 Total |

Final letter grades are based on the following scale:

A = 540-600 points B = 480-539 points C = 420-479 points
D = 360-419 points F = < 359 points

**Be advised**, this course is part of the sociology core, those courses required of students who major in sociology. Therefore, it is in your best interest to apply yourself and perform at the level necessary to ensure the grade requirements for the sociology core.

At any moment in the semester, you can gauge your progress in the course by tracking your grades on D2L. Take the total amount of points you have earned and divide it by the total amount of points possible to that point, your calculation will be your percentage. All attempts will be made to keep your grades up to date on D2L.

Grading FAQ:

Question: *Do you grade on a 'curve'?*

Answer: No. I grade on absolute points; a grading curve is simply grade inflation.

Question: *Can I earn extra credit?*

Answer: Any opportunities for extra credit will be afforded to all students in the course and at the discretion of the instructor.

**THE IMPORTANCE OF LABS:**

Each week's lab session is provided for you to learn and practice applying statistical methods, for using SPSS, and as time to work on your weekly lab assignment. The lab sessions, after a brief discussion, are an open time where you can work on your course work or other relevant course material. Lab sessions are an important, dedicated time where you as a student in statistics will have access to your professor, statistical software, and your peers in an effort contribute to your success in this course.

In order to be "dismissed" from each lab session, you will have to provide/show the following:

- All SPSS Output, properly formatted
- An indication of what information in the SPSS output you will use to analyze and interpret your results
- Any other questions / points as indicated on each lab assignment

We will not use SPSS during lecture; this is the point of the lab sessions. It is up to you to practice using the program. You will have to use it for your weekly homework, as well as to complete the data analysis paper. Therefore it is in your best interest to keep up with the SPSS homework.

Like many other social research methods, statistics is often a collaborative process. Therefore you will be assigned a lab partner with whom you will work during lab sessions. You are expected to work with your partner, but you will submit your own individual lab assignment. The completed assignment you submit as an individual, including textbook and SPSS analysis work, is expected to reflect your own individual effort.

Lab Assignment-related printing is available ***only*** for current-semester Sociology 3630 students in the Sociology/Anthropology Department Computer Lab, but only during Professor Gillespie's office hours. Each print job must be verified by Prof. G. in order to be printed to the lab printer.

**OTHER EXPECTATIONS:**

Class Attendance, Participation, and Policies:

You will sign-in each class-period. Learning statistics is not like other courses you have taken in your major. Rote memorization and cramming the night before the exam will **NOT** work in this class. Each part of the course systematically builds on all the material preceding it, so missing any part will put you behind for the remainder of the course. Also, the more practice you have working problems the better. Attending class is very important to your success.

While attendance is ***not*** a part of the grade requirements for this course, if you have 5 or fewer absences from lecture, you will be eligible for Prof. G's rounding rule. You can also be excused from one Lab Session; if you miss more than one lab session, you will no longer be eligible for the rounding rule.

The rounding rule means that if you are within 1.5 percentage points of the next grade level you will receive the next highest grade (i.e. you have a 78.5% after the final exam, and hence a C, you will earn a B). Your committed attendance can only help your grade: being present to learn and practice the course material, and being possible eligibility for the rounding rule!

*What is 'Class Participation'*?

Class participation is analogous to class *engagement*. Engagement in this course is exercised through your continued productive contribution to the course –reading assignments are completed, assignments are finished and submitted on time, and you come to class ready to be engaged. Engagement in the course is both critical to your personal success and the success of the group.

If you are going to be absent from a class session and have a legitimate reason for missing class (emergency, illness, death, etc.), please *contact me by email or telephone prior to the start of class*. It is your responsibility to be accountable for your attendance and engagement in the class.

*General Classroom Policy*

In all of my classes, I strive to provide a positive and productive learning environment for students. It is important that we all act in a respectful manner toward each other and do not disturb the class. I ask your cooperation in observing the following rules:

- Arrive on time.
- Do not come and go during the class period. This is disrespectful and disruptive for me and your fellow students. If you must go to the restroom, do so quietly, causing as little disruption as possible.
- Observe the cell phone and lap top policy at all times (see below).
- Do not carry on side conversations with your neighbors.

*Cell Phone and Computer Policy*:
If you bring your cell phone to class, please show respect for me and the other members of the class by either turning it off or setting it so that it does not make any noise. It is unacceptable to make or receive calls, or to text message while in the classroom. You will be asked to leave if you are using a cell phone while in class.

Should you be an EMT, police officer, or other professional "on call," please see me ASAP and set your phone to vibrate during class, and quietly leave the classroom to return any calls received. Failure to abide by this policy will result in your dismissal from the classroom.

**I do not allow use of personal computers in class**. If you do bring your PC to lecture, you will be required to put it away or to leave the classroom. If you must use a computer for academic purposes, you must bring appropriate documentation from the office of student services.

Academic Integrity:

ALL STUDENTS ARE EXPECTED TO COMPLETE THEIR OWN INDEPENDENT WORK. While students are encouraged to study in groups, their completed assignments are expected to be the independent work of the individual student.

You are responsible for making yourself aware of and understanding the provisions of the University's Student Conduct Code, available online at: www.eiu.edu/~judicial.

These policies include cheating, fabrication, falsification and forgery, multiple submissions, plagiarism, complicity to such acts, computer misuse, and classroom disruptions. Any breach of academic integrity will result in a failing grade.
If there is reason to believe you have been involved in academic misconduct, you will be referred to the Director of Student Standards for appropriate actions.

You are responsible for your work, the quality of your work, and the validity of your work. Any violation of academic integrity is serious and, if founded, will result in a zero for the assignment. *Ignorance is not an excuse and will not prevent a failing grade*.

Help with course material:

Office hours are provided for students to seek guidance and help with course content. Office hours are provided for the sole purpose of helping students and should be taken advantage of as needed.

**SURVIVING STATISTICS**

Lastly, Statistics is not a subject that is learned without practice *and* help. Do not be afraid to ask for help or come see me in my office. **I am more than willing to go the extra mile, but only if you are, too.**

**The best rules to live by in this course are:**

1. **Understand that you are going to work hard in this course and should expect to put in plenty of work time outside of the classroom.**
2. **Do the work – it is worth it.**
3. **Ask for help.**

**IMPORTANT INFORMATION:**

Disabilities Statement:

Students with documented disabilities are encouraged to contact the Office of Disability Services (581-6583) if they wish to discuss any necessary academic accommodations.

Medical Emergency Statement:

For medical emergencies, go to the nearest phone and call 911. All faculty offices have telephones and during normal business hours (8-12 and 1-4:30), the Sociology Office (Blair 3170) is open.

Be sure to state the floor and room number of the emergency to the 911 operator. If possible, someone should go to the central entrance of Blair Hall to direct EMS personnel to the medical emergency scene. If the medical emergency is on the second or third floor, someone else should hold the elevator on the first floor for EMS use.

Tornado Statement:

In case of a tornado warning, proceed to the center of the hallway on the first floor, near the posted severe weather signs. Under no circumstances should you leave the building.

Building Fire Statement:

In case of fire, activate the fire alarm and exit the building. When a fire alarm sounds, everyone must exit the building and cannot re-enter the building until allowed by the building coordinator or fire department official. Fire alarms are located at the north and south ends of the corridors just inside the fire doors.

The closest exits for all classrooms in Blair are on the north and south ends of the building. Under no circumstance should the elevator be used. Group assembly areas for all classes in Blair are either on the patio area between Blair and Old Main or on the southeast corner of the North Quad. As you exit the building, continue moving well away from the exits so that you do not impede the progress of other students or the work of fire officials. Move a safe distance away from the building.

**DISCLAIMER**

The course content and this syllabus are subject to change at any time to allow for a flexible and open learning environment.