SOC308-001: Statistics for Social Science
Spring 2011- PARK 107
MW 08:00am -09:40am

Instructor: Nishanth Visagaratnam
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The best way to contact the instructor is by e-mail at nvisagar@siu.edu.
Do not email the instructor using Blackboard.

Overview of the course
This course is required for undergraduate majors. The course will cover the logic, methods, interpretation, and application of statistics in sociology. Students will learn when, why, and how to use various univariate, bivariate, and multivariate statistics and techniques. We will discuss issues of causality, confidence in results, relationships, and more. Students will develop skills by calculating statistics by hand, by conducting analyses with real data, and by thinking, writing, and discussing statistics and analyses. At times, students will be required to work in pairs or groups in the classroom and to work independently on class assignments, homework, and exams.

Students will gain their knowledge from lectures, student presentations, and through course readings, writing, group work, practical applications using real data, and critical discussions. Furthermore, students will develop key skills that they can apply and use outside of the class, become critical thinkers by learning to think outside the box, build skills to present topics in class, and become self-directed learners.

Required Course Material
- Elementary Statistics in Soc Res: Essential 3rd Edition by Levin published in 2011; Allyn & Bacon, Incorporated; ISBN: 9780205638000.
- Calculator (a scientific calculator that can perform polynomials and square roots).
- Access to a computer with Windows 95 (or higher) and the internet.

Course and University Policies
1. Make-up examinations will be given only to students with University approved excused absences and those who notify the Instructor at least three days prior to the examination.

2. STUDENT CONDUCT CODE: Southern Illinois University at Carbondale is dedicated not only to learning, research, and the advancement of knowledge, but also to the development of ethically sensitive and responsible persons. The university seeks to achieve these goals through sound educational programs and policies governing individual conduct that encourage independence and maturity. By accepting membership in this university, an individual joins a community characterized by free expression, free inquiry, honesty, respect for others, and participation in constructive change. All rights and responsibilities exercised within this academic environment shall be compatible with these principles. Acts of Academic Dishonesty is a breach of the student conduct code. Dishonest includes: 1. Plagiarism, representing the work of another as one's own work; 2. Preparing work for another that is to be used as that person's own work; 3. Cheating by any method or means; 4 Knowingly and willfully falsifying or manufacturing scientific or educational data and representing the same to be the result of scientific or scholarly experiment or research; 5. Knowingly furnishing false information to a university official relative to academic matters; 6. Soliciting, aiding, abetting, concealing, or attempting conduct in violation of this code. You should consult with me if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.

3. Classroom behavior: Please be on time, turn off cell phones (unless you are on call then put them on vibrate AND inform the Instructor that you are on call), and do not engage in distracting & disrespectful behavior such as chatting, sleeping, leaving early, newspaper reading, doing suduko/crossword puzzles, and other course work. The professor reserves the right to report and remove students who continually engage in these behaviors. Students who leave early without university approved excuse will be counted absent for the day and any assignments turned in on that particular day will be a zero. The Instructor will ask disruptive students to leave the class, refusal to do so will result in the involvement of campus police and any other institutions deemed necessary for the safety of the students and the Instructor.

4. Reasonable accommodations will be available to students with disabilities. In order to take advantage of available accommodations, students must contact the SIU Disability Support Services (DSS) and then submit to me written documentation of the disability and necessary accommodations by the second week of the semester.

5. Class discussions should take place within a context of academic inquiry (you are here to learn) and in the spirit of understanding diverse perspectives and experiences. Students should not make negative comments about fellow classmates; demean, devalue or put down people for their differing experiences, backgrounds, and statements; nor show general signs of disrespect for the course, professor or other students. If any student feels attacked, harassed, or otherwise disrespected, for any reason, that student is encouraged to set up a confidential meeting with the professor. Students who cause any disruption in the class will be asked to leave the class immediately; time is of the essence in this class.

6. Grades. It is the student's responsibility to track his/her performance in this course. All work will be evaluated in terms of accuracy, effort, sophistication, clarity, and completeness (as relevant). Points will be deducted for late assignments for each weekday the assignment is late. The exams will encompass multiple choice and short answers.

90% or more = A
80-89% = B
70-79% = C
60-69% = D
59% or less = F

Check blackboard for articles, grades, class readings, exam study guides, class cancellation, homework assignments, and updates on the syllabus or anything pertaining to this class on a regular basis. The power points will NOT be available on Blackboard; so it's highly advisable that students not miss class. If you do not find this class under Blackboard, please see the instructor.

7. The professor reserves the right to assign additional work of any nature if it becomes apparent that students are not actively engaged in the material or need additional practice. Course grading will be adjusted accordingly. That said, there are no opportunities for "extra credit"; instead, take advantage of the numerous opportunities for actual credit (that is, complete all in-class activities, attend class, participate, do your homework, work hard, and see me if you need help of any sort.)

8. Emergency Procedures:
Emergency Procedures. Southern Illinois University Carbondale is committed to providing a safe and health environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in

buildings on campus, available on BERT's website at www.bert.siu.edu, Department of Safety's website www.dps.siu.edu (disaster drop down), and in Emergency Response Guideline pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.

Student Responsibilities and Requirements

Summary:
Three in-class exams (300 points)
Exam 1 covering weeks 1-5 on Thursday, February 12 (100 points, 20%)
Exam 2 covering weeks 6-12 on Thursday, April 9 (100 points, 20%)
Exam 3 covering weeks 12-the end of the semester (100 points, 20%)

1. Three exams in total: There will be three exams. Question format will range from interpretation/ problem solving/computational varieties to true/false, multiple choice and matching types. It will be necessary to "simply memorize" some of the material presented in class, the text, and any other material introduced in class and some exam questions will test this type of learning. However, my primary goal is for you to understand the course material and to be able to apply course concepts in various ways. As such, many exam questions will be designed to evaluate your understanding of material and your ability to apply course concepts and ideas rather than simply memorize information.
   You will be allowed to bring ONE note card with formulas only for each exam. All note cards will be checked on exam day and must be turned in with the exam. Inappropriate note cards will be taken away prior to the exam and student will take the exam without note card. Sharing of note cards, calculators, any materials needed for the exam is not permitted; students will receive an automatic zero for the exam.

   The examinations will cover specific chapters. However, to understand material in the latter part of the term, you will need to have a sufficient understanding of the material presented earlier in the term. Knowledge is cumulative and in this way, the exams are too. As a result, exams two and three are comprehensive.

   Exams will not be returned to the students; the students will have to meet with the Instructor during office hours or make an appointment. Grades for the exams will not be communicated/discussed via email or telephone.

Homework exercises (100 total points): 10 homework assignments from the textbook each worth 10 points (The Instructor holds the right to change the total number of assignments and how much each assignment is worth depending on circumstances). The assignments will be due at the beginning of class before 8:15AM. The Instructor will take off points for any assignments tuned in later than 8:15AM. It is the students' responsibility to turn in the assignment by the due date and time. Only certain questions will be assigned in each exercise (listen in class for announcements). Due dates will be announced in class – though deadlines may be changed as necessary; stay tuned for in-class announcements or Blackboard announcements and emails. Because homework will vary in terms of the number of questions, individual questions may be worth different points. Ten points is the maximum score, all points will be summed for maximum of 100 points total (10*10=100 points)

In class assignments (X total points): Attend all classes and complete in-class assignments. In-class assignments are usually unannounced, so there will be *scheduled and unscheduled* in-class exercises (usually some type of group work, but may be individual work – at least 10 occasions on the syllabus already). The amount of points for each in-class assignment will vary. Always bring your calculator and notebook paper to class. About once every two weeks (more or less), there will be some type of in-class scheduled or unscheduled activity or extra task related to homework. You will turn in the product of the activity; it may be in the form of notes, writing, quizzes, or interpretation/problem solving/computational tasks. In-class work may be individual or may be group. Students may earn 1 to 10 points on each task depending on effort and quality. About 10 points will be assigned to each task; all points will be summed and will count toward your final grade.

You must be present to complete in-class assignments and to get credit (in class work cannot be made up – so consistent attendance is critical. If you are absent, you will receive a zero on the in-class work).

Sometimes homework and in-class assignments will be graded by another classmate during class and you will grade another classmate's exercise. DO NOT ask me last minute questions about homework on the day the assignment is due – plan ahead and see me during office hours. NO homework or in-class assignment will be accepted after one week. If for some reason you cannot make it to class on the day the assignment is due, it is your responsibility to get the assignment to me prior to or at the start of the class on which they are due (I have a mailbox in Faner 3384).

Attend all classes and participate in class and group discussions and activities. Come to office hours to discuss any questions, interests, problems with the course material. I am here to help and advise you but I can only do that if you come and see me. Do course reading for the day assigned. Check Blackboard (at least weekly) for announcements, assignments, changes, grades, etc. Track your performance in the course. If class must be canceled for any reason, I will try to alert you via Blackboard announcement or Blackboard e-mail.

TENTATIVE SCHEDULE

(SUBJECT TO MULTIPLE CHANGES; THE CHANGES WILL BE ANNOUNCED IN CLASS AND/OR VIA BLACKBOARD ANNOUNCEMENTS)

*All homework assignments must be turned in by 8:15AM of the due date. Assignments turned in after 8:15am will be counted late (points will be deducted at the discretion of the Instructor).

Week 1: Course Introduction/ Statistics and Variables

M 1/17: MLK Holiday- no class

W 1/19: Syllabus; Introduction to social stats- Chapter 1

Reading assignment: Read Ch.1

Announced in-class assignment p.18; numbers 1-9 due at the end of class. You may work in pairs or individually.

Reading assignment: read ch.2 for

Week 2: Organizing the data

M 1/24: frequency and percentage distribution

W 1/26: Organizing the Data

Frequency distributions, comparing distributions, proportions and percentage, simple frequency distribution of ordinal and interval data

Week 3: Organizing the data & measures of central tendency

M 1/31: Organizing the data: grouped frequency distributions of intervals TO graphic presentations

Homework: 1-8, 11, 13, 17, 19, 22 found on p. 51 DUE Monday 2/7

Reading assignment: Ch.3

W 2/2: Introduction to measures of central tendency (mode, mean, median)

Week 4: Measures of central tendency & measures of variability

M 2/7: Homework assigned from 1/31 due at the beginning of class

Comparing mode, median, and mean; range

Reading assignment: Ch.4 (Measures of variability)

W 2/9: variance, standard deviation, step-by-step illustrations, comparing measures of variability

Homework: Due 2/14 p. 82 numbers 1-9, 13, 16

Week 5: Review and Exam 1 (bring a calculator and a #2 pencil)

M 2/14: Homework from 2/9 due at the beginning of class

Summary of chapters 1-4

In-class assignment

Exam Review

W2/16: Exam I

-bring a calculator and a #2 pencil, cell phones or other electronic devices are not allowed to be used on the exam

-any cheating OR suspicion of cheating will result in the student getting a zero in the class

Reading assignment: Ch.5

Week 6: Probability and the normal curve
M 2/21: probability, probability distribution, characteristics of the normal curve, the area under the normal curve

W 2/23: Standard scores and the normal curve, finding probability under the normal curve, Step-by-step illustrations
Homework: p.114 due on 2/28 found on p.114, numbers 1-6, 8, 10, 14, 16
Reading assignment: Ch.6

Week 7: Samples and populations
M 2/28: Homework due from 2/23 at the beginning of class
Random sampling, sampling error, sampling distribution of means, sampling error of the mean

W 3/2: standard error of means, confidence intervals, t-distribution

Week 8: Samples and population
M 3/7: t-distribution, estimating proportions, step-by-step illustration of confidence intervals using t, step-by-step illustration of confidence interval for proportions
Homework Due 3/9 found on p. 143 numbers 1-7, 11, 15, 21

W 3/9: Homework due from 3/7 at the beginning of class
Continue with samples and populations
Answer homework problems (after it has been turned in to the Instructor)
Reading assignment: Ch.7

Week 9: Spring Vacation 3/12 to 3/20

Week 10: Testing difference between means
M 3/21: null hypothesis: no difference between means, the research hypothesis: a difference between means, testing hypothesis, levels of significance, standard error of the difference between means
3/23: Step-by-step illustration of the difference between means, comparing dependent variables, test of difference between means for same sample measured twice

Week 11: Testing difference between means
3/28: Step-by-step illustration of the test of difference between means for matched samples, two sample test of proportions, requirements for testing the difference between means
Homework due 4/4 found on p. 181, numbers 1-10, 13, 16, 21, 34

3/30: Review for Exam II; ask questions regarding homework that's due on 4/4
In-class assignment due at the end of class

Week 12: Exam II and Analysis of Variance
4/4: Homework from 3/28 due
Exam II- bring a calculator and a #2 pencil; cell phones or other electronic devices are not allowed to be used on the exam; any cheating OR suspicion of cheating will result in the student getting a zero in the class
Reading assignment: Ch.8
4/6: Analysis of variance, the sum of squares, mean square, the f-ratio
Homework due 4/11 found on page 209, numbers 1-6,9
Reading assignment: Ch.9

Week 13: Nonparametric Tests of Significance
4/11: One-way chi-square test, step-by-step illustration of one-way chi square test,

4/13: topic from 4/11 continued, the median test, summary of nonparametric tests of significance

Week 14: Nonparametric Tests of Significance
4/18: In-class assignment for one-way and two-way chi-square tests due at the end of class
Homework due 4/25 page 239, numbers 1-9, 13, 15, 21, 24
Reading assignment: Ch. 10

4/20: Questions over homework that's due on 4/25; Introduction to correlations

Week 15: Correlation
4/25: strength of correlation, direction of correlation, curvilinear correlation, step-by-step illustration of correlation

4/27: The correlation coefficient, Pearson's correlation coefficient, step-by-step illustration of Pearson's correlation coefficient
Homework due 5/2 found on page 266, numbers 1-7, 9, 18
Reading assignment: Ch.11

Week 16: Correlation and Regression
5/2: homework from 4/27 due at the beginning of class
The regression model, interpreting the regression line, regression and Pearson's correlation

5/4: In-class assignment (Ch. 1-10)
Review for final exam

Final Exam:
Exam III is your final exam, it is comprehensive, multiple choice, and short answer. The final exam will be held on Monday, May 9, 2011 in the classroom from 7:50AM to 9:50AM. BRING A #2 PENCIL AND A CALULATOR. Cell phones or any other electronic devices are not allowed during the examination. The University may change the above scheduled final exam date, location, and time, go to **http://registrar.siuc.edu/pdf/examspring11.pdf** and check one week prior to final exam week. It is your responsibility to take the final exam, **there will not NO make up for the final exam under any circumstance**. If you know you will not be able to take the final exam on the assigned day, arrange with the Instructor at least one week prior to the assigned date of the final exam.

*No use of electronic devices during class (these include but are not limited to: lap tops, computers, IPods, cell phones, cd/MP3 players, etc) except for a calculator. Turn off your cell phone or put it on silent when you enter class! If you are on call due to work, please let the Instructor know at the beginning of the class. Do not use any electronic devices to take notes; just use a notebook or loose-leaf papers.

The Instructor reserves the right to make any changes and amendments to the syllabus as necessary.