Analysis & Decision Making

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Spring 2016. Allwine Hall 304.
Tuesdays 5:30pm–8:10pm.

Office Hours: By appointment.

COURSE DESCRIPTION

Decision-making supported by quantitative analysis is becoming increasingly important in the public and nonprofit sectors. As a result, managers are expected to be fluent in quantitative analytical skills. This course is a graduate level, introductory statistics and research methodology course. It will focus on applied quantitative analysis for public/nonprofit management and policy. The goal of the course is two-fold: (1) to train you to apply the concepts presented and use them to inform real world decision-making in the public and nonprofit sectors and (2) to prepare you to successfully complete your capstone project.

COURSE OBJECTIVES

Upon successful completion of this course, students should be able to:

1. Identify and define key theories and concepts of research design, descriptive and inferential statistics, multiple regression.

2. Design and execute an analytical research project.

3. Demonstrate proficiency regarding data collection, analysis, and evaluation.

4. Critically evaluate research designs and methods presented in applied and academic sources.

5. Correctly select and apply the appropriate analytical tool for the problem and data at hand.

6. Understand and evaluate the ethical issues surrounding data collection, analysis, and evaluation.

Student progress on these learning objectives will be measured through a combination of examinations, homework assignments, and class discussion.

TEXTBOOKS

The main texts of this course are available at the bookstore. However, these books likely can be obtained cheaper elsewhere (primarily online).

Healey, Joseph F. 2016. *The Essentials of Statistics: A Tool of Social Research*. 4e. Centage Learning. ISBN: 978-1305093836

Chambliss, Daniel F. and Russell K. Schutt. 2016. *Making Sense of the Social World: Methods of Investigation*. 5e. Sage. ISBN: 978-1483380612

REQUIREMENTS

ATTENDANCE

Attendance is not mandatory; however, it is strongly recommended. If you miss a class, it is your responsibility to obtain the information you missed from a classmate. **I do not have a policy to take roll, but your absence from class will noted. It will be difficult to achieve above a C in this course if you miss more than 2 classes.** I expect everyone to be on time and ready to being class at 5:30pm. There are important announcements made at the beginning of each class, and a late arrival is disruptive to the class. Do not be late.

MIDTERM EXAMINATION – 25%

This examination will cover only the material up to this point in the class. You may use a *8.5" x 11", single sided, handwritten page of notes*. You will turn your notes page in with your exam. Notes may not be electronically produced.

RESEARCH DESIGN PROJECT – 25%

This project is designed to mimic the Capstone proposal process you will all be required to engage in later in your program. I will provide more specific information on this assignment before the midterm examination.

As a part of this assignment, I will require you to become CITI certified. Certification will be necessary should you want to collect your own data for your capstone project. The process takes about four hours. I suggest you complete this only after the second lecture. Course materials prior to this lecture are important to completing certification. More information on the process can be found at https://www.citiprogram.org/.

FINAL EXAMINATION – 35%

You will sit for a non-cumulative final exam. Due to the nature of this topic, knowledge from prior to the midterm will be essential to success on the final. You will be expected to use a calculator. You may also use a *8.5" x 11", single sided, handwritten page of notes*. You will turn your notes page in with your exam. Notes may not be electronically produced.

HOMEWORK – 15%

There is a homework assignment nearly every week of this course. They will be graded on a zero (not turned in), check minus (✓−, submitted and deficient), check (✓, submitted and adequate), and check plus (✓+,

submitted and exemplary). Very few check plusses will be given and a check constitutes full credit. You are permitted to miss **one** (i.e. not turn in) homework assignment without penalty.

Homework must be submitted by the beginning of each lecture, either during class or before class in my mailbox in CPACS 111. Texted based answers must be typed. Mathematical problems may be handwritten. If you must miss a class, it is your responsibility to make sure your homework assignment turned in. Emailed homework **will not** be accepted (also see policy on late assignments below).

COURSE METHODOLOGY & POLICIES

Class presentations will be conducted through a combination of lecture, class discussion, and demonstration. Students are strongly encouraged to participate in class discussion and to ask questions. Everyone in class brings a unique perspective, and I believe that perspective is a valuable addition to the course. Please come to class prepared and ready to participate.

I will be teaching this course as an introductory graduate course in statistics and research methodology that combines theoretical and conceptual topics with practical application. It is my assumption that students have limited undergraduate or graduate exposure to the topics covered in this course. As such, there is a large amount of material to cover in this course, and we will be moving quickly. Do not fall behind in the reading. It will be difficult to catch up.

COMMUNICATIONS

Course announcements will be made via email so it is imperative that you check your e-mail daily. "I didn't get the email" is never a valid excuse. The most effect method of communicating with me is using email; however, you are also encouraged to schedule a meeting at my office or a phone call.

CALCULATORS & SOFTWARE

It is **required** that you have a calculator with square root functionality for this class. We will likely not use a calculator in every subject; however, it is difficult to predict when you might need to use it. As such, please plan on having access to a calculator.

We will use SPSS, a statistical software package, in this course. There are many locations on campus where SPSS can be accessed including the Criss Library and the Durham Science Center (Room 104). If you wish to use this software off campus, semester length access can be purchased from IBM for a small fee. Click this link for more details.

LATE ASSIGNMENTS

Late assignments **WILL NOT** be accepted without a valid UNO excuse. If you have a schedule conflict on any day an assignment is due, please contact me beforehand to make arrangements for turning in your assignment early.

STUDENTS WITH DISABILITIES

If you have or believe you have a disability that may impede your learning, please contact the Disability Services Office. I will make every effort to accommodate you in accordance with UNO policy, procedures,

and recommendations. Additional information can be found at
http://www.unomaha.edu/student-life/inclusion/disability-services/students/where-to-begin.php.

ACADEMIC HONESTY

All students at the UNO are expected to conduct their academic affairs in an honest and responsible manner. Any student found guilty of dishonesty in academic work shall be subject to disciplinary actions. Acts of academic dishonesty include, but are not limited to:

- plagiarism, i.e., the intentional appropriation of the work, be it ideas or phrasing of words, of another without crediting the source;

- cheating, i.e, unauthorized collaboration or use of external information during examinations; assisting fellow students in committing an act of cheating;

- falsely obtaining, distributing, using or receiving test materials or academic research materials; submitting examinations, themes, reports, drawings, laboratory notes, research papers or other work as one's own when such work has been prepared by another person or copied from another person (by placing his/her own name on a paper, the student is certifying that it is his/her own work); or

- improperly altering and/or inducing another to improperly alter any academic record.

Additionally, graduate students are more likely to assume roles as active scholars. With these roles come added responsibilities for academic honesty. For such individuals academic honesty requires an active pursuit of truth not just an avoidance of falsehood. This pursuit includes but is not limited to:

- providing a full and complete representation of any scholarly find, be it experimental data or information retrieved from archives;

- taking care that the resources of the University (e.g., library materials, computer, or laboratory equipment) are used for their intended academic purposes and they are used in a manner that minimizes the likelihood of damage or unnecessary wear;

- assuring that one's co-workers are given due credit for their contributions to any scholarly endeavor; respecting a diversity of opinion and defending one's colleagues as well as one's own academic freedom; respecting the rights of other students who may come under the tutelage of the graduate student and being fair

- and impartial in grading and other forms of evaluation; and seeking permission from an instructor when submitting to that instructor work which the student has submitted for a course taken in the past or intends to submit for another course currently being taken.

In cases of alleged academic dishonesty, the instructor shall attempt to discuss the matter with the student and explain the sanction(s) which he/she plans to impose. In the event that the student challenges the allegation of academic dishonesty, or is not satisfied with the sanctions(s) imposed by the instructor, the student may file an appeal according to the approved appeal policies of the University of Nebraska Graduate College.

Tentative Course Outline

Date	Topic	Reading
January 12	Introduction to Social Research	C&S, Ch 1 & 2
January 19	Measurement & Validity	C&S, Ch 3 & 4; H, pg. 10-14
January 26	Sampling	C&S, Ch 5, H, pg. 141-150
February 2	Research Designs	C&S, Ch 6, 7, 12
February 9	Qualitative Research	C&S, Ch 9, 10, 11
February 16	*Midterm Examination*	
February 24	Introduction to Quantitative Research	H, Ch 1, 2
March 1	Central Tendency & Dispersion	H, Ch 3, 4
March 8	The Normal Curve	H, Ch 5
March 15	Estimation	H, Ch 6, pg 151-167
March 22	*Spring Break*	
March 29	Hypothesis Testing I	H, Ch 7
April 5	Hypothesis Testing II	H, Ch 8
April 12	Hypothesis Testing III	H, Ch 10
April 19	Bivariate Measures of Association	H, Ch 11, 12
April 26	Multivariate Measures of Association	H, Ch 13
May 3	*Final Examination*	

C&S – Chambliss & Schutt
H – Healey