

MEJO 704.1 Statistics for Social Science Research Fall 2017

Catalog Description: Permission of the instructor for students lacking the prerequisite. Course examines when and why to use particular statistical tests to address a given research question and provides a framework for understanding research that uses quantitative methods. Prior knowledge of statistics NOT assumed.

Prerequisite: MEJO 701.

This course meets 3:30-4:45 p.m. on Mondays and Wednesdays in Carroll 128.

Instructor

Joe Bob Hester, Ph.D
Associate Professor

Office: 233 Carroll Hall

Office hours are 2:00-3:00 p.m. on Monday and Wednesday or by appointment at other times. These hours are made available to provide you with time outside of the classroom for discussion of matters related to course work, as well as for academic and/or career advising.

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Materials

Required textbooks for this course:

- *OpenIntro Statistics* (3rd ed., 2015) by Diez, Barr, and Cetinkaya-Rundel. You can download a FREE pdf of the text at <https://www.openintro.org/stat/textbook.php> or purchase one through Amazon.
- *Understanding and applying basic statistical methods using R* (2016) by Wilcox. You can [read it online via the UNC Library](#) or purchase a copy through Amazon.

Additional readings will be provided by the instructor.

In addition, we will be using R and RStudio to do our statistical analyses. Both are free and open-source. You will need to bring your laptop computer to each class meeting.

- [Download R](#) (MacOS users must install [XQuartz](#) before installing R.)
 - [Download RStudio](#) (after installing R)
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Requirements & Grading

All grades are assigned using the H, P, L, F grading scale and grade definitions of the University of North Carolina Grading System.

Students are graded according to the highest professional standards. Grades are calculated based on the percentage correct on individual assignments and tests. Percentages are converted into letter grades of H (high pass), P (pass), L (low pass) and F (fail). Below are the equivalencies for each grade:

- F (fail) = 69% or less (a “D” or below)
- L (low pass) = 70-79% (a “C” grade)
- P (pass) = 80-89% (a “B” grade)
- H (high pass) = 90-100% (an “A” grade)

There are no extra credit projects available in this course.

Course Format/Objectives

This course emphasizes the application of statistical tests to address hypotheses and research questions typical of quantitative social science research designs. Lessons include the calculation and interpretation of descriptive statistics, t-tests, analyses of variance, simple and multiple linear regression, and internal reliability analyses. Discussions include topics such as when a parametric versus nonparametric test should be used, when it is more appropriate to use a test of group differences as opposed to a correlation-based analysis, what mediator and moderator variables are, and strengths and limitations of typical assessments of measurement reliability.

This course is rooted in practice with real data sets using R as the statistical platform, although some hand calculations involving basic algebra will be required. By the end, students will be equipped to:

- review quantitative results sections of research articles,
- understand how to select the best type of test depending on the hypothesis,
- effectively apply these tests and interpret the results using R,
- and be prepared to expand their current knowledge base in applied statistics.

Homework Assignments (65%):

There will be a minimum of 10 homework assignments and a maximum of 13 homework assignments. Regardless of the number, all homework assignments count equally in computing the final grade.

These assignments typically require the use of the R statistical package on your own computer.

Take-Home Final Exam (35%):

There is one comprehensive take-home exam with no make-up opportunity. This exam is worth 35% of the total course grade.

This exam and its supporting data set(s) will be made available through the course Sakai site before the semester is over and will be due at the beginning of the final exam period (4-7 p.m., Saturday, December 9, 2017).

The exam is a combination of multiple choice, calculations, and data analysis/interpretation/presentation. This is an individual assignment, however, lecture material, homework, and print and online sources may be used as reference.

You are strongly encouraged to ask the instructor for help or clarification for any questions you might have on the final take-home exam.

NOTE: This course requires extensive time and effort outside of the classroom. On average, you should plan on a minimum of 10 hours per week.

Attendance & Participation

This course operates under the University of North Carolina Class Attendance Policy. Regular class attendance is a student obligation, and a student is responsible for all the work, including tests and written work, of all class meetings. Note that there is no opportunity to make up homework, quizzes, or in-class exercises for any reason. Make-up opportunities for other assignments are only available for excused absences.

Students are expected to actively participate in class discussions by sharing observations, insights and questions with the instructor and members of the class. Discussion will allow each student to benefit from all the other students' insights and to work toward a final interpretation or understanding that may differ from the one he or she reached individually. This requires that assigned readings and/or homework exercises be completed prior to arrival to class.

Students are responsible for regular and punctual class attendance and should be in their seats before the start of class. Students arriving more than 10 minutes late for class will be considered absent.

Academic Integrity & Counseling

This course operates under the Honor System of the University of North Carolina at Chapel Hill. Plagiarism and other forms of academic dishonesty will not be tolerated in this course, and disciplinary actions will be enforced in any instance of academic dishonesty including, but not limited to, cheating, plagiarism, collusion or the abuse of materials. If you have a question about academic dishonesty, it is better to ask than to risk the consequences.

Unless otherwise directed, students should complete all graded academic work in this course on their own, without collaboration, and include a signed honor pledge when it is turned in to the instructor.

If you need individual assistance, it's your responsibility to meet with the instructor. If you are serious about wanting to improve your performance in the course, the time to seek help is as soon as you are aware of the problem – whether the problem is difficulty with course material, a disability, or an illness.

The University's policy on Prohibiting Harassment and Discrimination is outlined in the 2017-2018 Catalog. UNC is committed to providing an inclusive and welcoming environment for all members of our community and does not discriminate in offering access to its educational programs and activities on the basis of age, gender, race, color, national origin, religion, creed, disability, veteran's status, sexual orientation, gender identity, or gender expression. If you require special accommodations to attend or participate in this course, please let the instructor know as soon as possible. If you need information about disabilities visit the Department of disability Services website.

Diversity

UNC is committed to providing an inclusive and welcoming environment for all members of our community and does not discriminate in offering access to its educational programs and activities based on age, gender, race, color, national origin, religion, creed, disability, veteran's status, sexual orientation, gender identity, or gender expression.

The School of Media and Journalism adopted Diversity and Inclusion Mission and Vision statements in spring 2016 with accompanying goals - <http://www.mj.unc.edu/diversity-and-inclusion>.

ACEJMC core values & competences

The Accrediting Council on Education in Journalism and Mass Communications (ACEJMC) requires that, irrespective of their particular specialization, all graduates should be aware of certain core values and competencies. Learn more about them here: <http://www2.ku.edu/~acejmc/PROGRAM/PRINCIPLES.SHTML#vals&comps>.

This course focuses on the following core values and competencies:

- Thinking critically, creatively and independently;
- Conducting research and evaluating information by methods appropriate to the communications professions in which they work;
- Understand concepts and apply theories in the use and presentation of images and information,
- Critically evaluating their own work and that of others for accuracy and fairness, clarity, appropriate style and grammatical correctness;
- Applying basic numerical and statistical concepts;
- Applying tools and technologies appropriate for the communications professions in which they work.