

Statistical Methods II
15:291:532:01
3 Credits

Instructor: Duanli Yan	Day & Time: Mondays, 4:50-7:30pm
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Mode of Instruction:	
<input type="checkbox"/> Lecture <input type="checkbox"/> Seminar	<input type="checkbox"/> Hybrid <input type="checkbox"/> Online

Learning goals

This course is the second part of a two-semester sequence in statistical methods designed to introduce students to the most commonly used methods in educational and social science research.

Course catalogue description

This course assumes that students have taken the first part of the sequence or have equivalent knowledge through one-sample t-test. Topics covered in this course include two-sample t-test, chi-square test, regression analysis, and one- and two-way analysis of variance (ANOVA).

Class materials/ Textbooks:

Moore, D. S., McCabe, G. P., & Craig, B. A. (2009). *Introduction to the practice of statistics (6th ed)*. New York: W. H. Freeman.

State or Professional Organization Standards:

Course Requirements

- 1). **Exams:** The two in-class exams—midterm and final—are worth 30% and 30% of the final grade, respectively. The exams may consist of multiple choice items, computations, and short answer/essay questions.
- 2). **Homework assignments:** Approximately 10 homework assignments (worth 40% of the final grade) will be given throughout the semester. Homework assignments are due at the beginning of the class the week after they are assigned. No late homework assignments will be accepted, but the lowest homework assignment score will be dropped.

Grading and Activities:

Grading is based on: Attendance, Participation, Quizzes, Homework, Unit plan and lesson plan, Midterm, Final exam, Final Project, and Final Paper.

Specifically, the final letter grade will be assigned as follows:

Final Score	Letter Grade
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90% and Above	A
80%-89%	B+
75%-79%	B
65%-74%	C+
60%-64%	C
Below 60%	F

PASW Statistics will be used extensively to conduct statistical analyses for homework assignments and class exercises. However, for the exams, a calculator that performs basic operations will suffice.

Academic Integrity Policy:

The Office of Student Conduct supervises issues related to violations of academic integrity (see <http://academicintegrity.rutgers.edu>). Please familiarize yourself with the university policy on academic integrity at http://academicintegrity.rutgers.edu/files/documents/AI_Policy_2013.pdf

Office of Disability Services:

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Course Schedule:

Tentative list of topics for discussions (by week)

Week	Topic	Assignments/ Readings
1	Review and Procedure for Dependent Samples	
2	Inference for Two Population Means	
3	Inference for Population Variances	
4	Inference for Proportions	
5	Analysis of Two-Way Tables	
6	Simple Linear Regression I	
7	Review	
8	MIDTERM EXAM	
9	<i>No Class (Spring Recess)</i>	
10	Simple Linear Regression II	
11	Multiple Regression	
12	One-Way ANOVA	
13	Contrasts and Multiple Comparisons	
14	Two-Way ANOVA	
15	FINAL EXAM (Cumulative)	