522, Design of Experiments II, Professor Lee Jussim, Spring, 2026
Last updated 1/13/26, 1240pm

(Really, intermediate statistics: ANOVA and regression).

Location: Busch Psychology Building, Room 105

Day/time: Tuesdays, 1:10-3:30pm.

My class email address: jussim@scarletmail.rutgers.edu

Website for class (including but not restricted to powerpoint slides):
https://sites.rutgers.edu/lee-jussim/teaching/

NO OFFICE HOURS, BUT!

Option 1: Just see me after class. I will usually have time.

Option 2: See me after class to make an appointment.

Option 3: Email me for an appointment.

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Part I, Review

T-tests, correlations, bivariate regression, one-way ANOVA, two way ANOVA, three way ANOVA, post hoc and a priori pairwise comparisons

Part II

Complex contrasts, effect sizes, repeated measures ANOVA, mixed model ANOVA, multiple regression

WHAT YOU WILL NEED FOR THIS COURSE

THERE IS NO REQUIRED BOOK.

- Formulas, when required, will be presented in class. Most can be found online. Conceptual discussions of each statistic are also widely available online.

LAPTOP OR TABLET.

- If you do not own one, let me know and I will seek a loaner from the Psychology Department.
- You are going to be DOING a lot during class.

SPSS

- Available for free via Rutgers Software Portal
  - https://software.rutgers.edu/index/ (gateway to RU free software)
  - https://software.rutgers.edu/product/3884 (for SPSS)

Overview of This Class

Some, but not a lot on statistical theory, assumptions, formulas.

- more in beginning, because fundamental

Emphasis on knowing what stat(s) to apply to what type of data.

How to use SPSS to perform analyses

- also, Excel, to peak under the hood, i.e., see how the formulas work in practice

How to interpret results.

- SPSS output
  - Narrow interpretation: Where are the means, sds, F's, p's, corrs, Ns, etc?
  - Broad interpretation: What do the results mean, conceptually?

Learning Goals

WHEN TO USE WHAT STAT

HOW TO PERFORM THE STAT

HOW TO INTERPRET AND REPORT THE OUTPUT

WAYS TO FOLLOW UP THAT ANALYSIS THAT MIGHT BE NECESSARY, VALUABLE OR IMPORTANT.

LIMITATIONS AND DRAWBACKS TO THESE STATS

Grading

I have never given a grad a grade <B in any grad class.

The goal of this class is mostly pragmatic: To steep you in experience performing and interpreting stats.

Still, I have to have some way of grading you.

Homeworks, readings, and mini-projects (70%)

Grading: All will be graded on a simple scale of 0, 1, 2.

2 (good faith attempt, at least mostly right); 1 (major portions missing or wrong); 0 (did not do it at all)

Bonus: SPSS v. R

For those of you who wish to program in R, you get an extra HW point if you produce and write up identical results using R & SPSS regardless of whether it is correct. You get an extra two points if it is also correct. But your HW must articulate how they are identical.

Grading

Take Home Project in Two Parts

Midterm (10%) and Final (20%) are really one continuous project, in steps.

- Midterm: Proposal, due early April, date tba
- Final: APA style writeup of project proposed for midterm, including analyses, due end of semester, date tba.

Requirements:

You are required to analyze actual data, preferably your own or your advisor's. It can be data already published, but it must be real data.

- If you have no access to any data of any kind, see me.
- Midterm: 3-5 pages.
- Final 5-10 pages (text). Title, abstract, tables, figures, references, appendices do not count toward page limits.

  - intro, part 2, thru intro to t-tests.pptx

Submission of HW's and Papers

Submissions to: jussim@scarletmail.rutgers.edu

HW's are due the Thursday after class at noon, except where otherwise noted. Loss of two points per day late for HW's.

1. Word preferred.
2. If computations or statistical programming and output are required, provide it, and the syntax (code) that produced the output.
3. Make sure your name is on the assignment.
4. Please put HW (or "midterm paper" or "final paper") in the subject line of the email to me. If HW, put in a # or descriptor to distinguish it *from every other HW assignment.*