

## Data Analysis for Human Ecology

### Course 11:374:302

**Spring 2017, T/F 12:35-1:55, Loree 023**

**CONTACT INFORMATION:**

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**COURSE MATERIALS:**

Privitera, Gregory J. (2016). Essential Statistics for the Behavioral Sciences. Sage Publications.

<https://edge.sagepub.com/priviteraess> : Student support website

SPSS on Rutgers Apps, found at [Apps.rutgers.edu](http://Apps.rutgers.edu)

Additional reading as assigned.

**COURSE DESCRIPTION:**

This course provides an introduction to the basics of data analysis for social sciences. Because a wide range of social science disciplines are represented within the field of Human Ecology, this course will explore many approaches to the analysis of data, including both quantitative and qualitative. The range of ways in which social scientists study human dimensions of environmental issues will be explored, and students will learn to approach data with multiple analytical tools.

Research Methods for Human Ecology (11:374:201) is a pre-requisite for this class.

**LEARNING OBJECTIVES:**

By the end of the course, students should be able to do the following.

1. Display and organize data in appropriate graphs and figures.
2. Recognize when qualitative and/or quantitative analyses are appropriate for a given research question.
3. Identify the appropriate statistical tests to use for a range of quantitative research goals.
4. Understand underlying assumptions of selected statistical tests, as well as biases and reporting issues.
5. Conduct statistical tests using SPSS.
6. Utilize appropriate qualitative approaches to summarizing and interpreting data.
7. Interpret research results.

## ASSIGNMENTS/RESPONSIBILITIES & ASSESSMENT:

Students are expected to read the textbook to complete weekly homework assignments. Class attendance is not required, but is strongly recommended. In class work cannot be made up unless there is a documented and excused absence. Given the cumulative nature of the course, and the number of in-class assignments and their importance in the final grade, it will be very difficult to pass the course without attending classes.

Homework: 10%

In-class assignments: 15%

Quizzes: 15%

Exams: 50%

Class participation: 10%

You will be sitting at a computer for most classes. It is important for me, for you, and for your classmates that you focus on the work we are doing together in class, and that you are not engaged on social media, other classwork, or other unrelated things online. If I see you on an unrelated website or program during class, you will lose one class participation point for each offense. The same goes for being on your phone during class.

## OTHER INFORMATION:

Students will be responsible for adhering to the academic integrity policies found at <http://academicintegrity.rutgers.edu>.

It is important that students have the tools to succeed in this course. Please see the instructor \*as soon as possible\* with any difficulties or questions regarding the course materials. In addition, the Office of Student Affairs is available at <http://studentaffairs.rutgers.edu> for any other needs or concerns.

## Tentative COURSE SCHEDULE, syllabus will be updated throughout the semester:

| Class/date | Topic                           | HW due that class   |
|------------|---------------------------------|---|
| 1.17       | Intro to class, review syllabus | none  |
| 1.20       | Intro to statistics             | Read CH 1 and How to use SPSS with this book (p. xxxv)  |
| 1.24       | frequency distributions         | Read Ch 2   |
| 1.27       | frequency distributions         | Ch 2 HW due<br>Ch 2: Do problems 2, 3, 4, 8, 9, 12, 14, 18, 19, 25, 27, 28, 32.<br>"Quiz" This will be a practice quiz, and it will count towards in class assignments. |
| 1.31       | Central tendency                | Read Ch 3   |
| 2.3        | Central tendency                | Ch 3 HW due, it's on google drive; start reading ch 4   |
| 2.7        | Summarizing data                | Quiz, and finish reading Chapter 4.   |
| 2.10       | Probability                     | Read Chapter 5.   |

|      |                                   |   |
|------|-----------------------------------|---|
| 2.14 | Probability                       | Ch 5 hw and quiz  |
| 2.17 | Probability                       |   |
| 2.21 | Exam 1                            | Will include chapters 1-6. Both SPSS and non-SPSS sections. |
| 2.24 | Review exam                       |   |
| 2.28 | Central Limit Theorem             | Chapter 5   |
| 3.3  | Sampling Distribution of the Mean | Chapter 5   |
| 3.7  | Sampling Distribution of the Mean | Chapter 5   |
| 3.10 | z-tests                           | Chapter 6   |
| 3.14 |                                   | Spring break  |
| 3.17 |                                   | Spring break  |
| 3.21 | z-tests                           | Chapter 6   |
| 3.24 | z-tests                           | Chapter 6   |
| 3.28 | Exam 2                            |   |
| 3.31 | t-tests                           | Chapter 7   |
| 4.4  | t-tests                           | Chapter 7   |
| 4.7  | t-tests                           | Chapter 8   |
| 4.11 |                                   |   |
| 4.14 | ANOVA                             | Chapter 9   |
| 4.18 | ANOVA                             | Chapter 9   |
| 4.21 | Correlation                       | Chapter 13  |
| 4.25 | correlation                       | Chapter 13  |
| 4.28 |                                   | Review  |

Final exam May 4 12-3 PM