

Course Syllabus
15:291:532:90
Statistical Methods II
Spring, 2012

Prepared by Prof. Chia-Yi Chiu

Course Information

Instructor: Chia-Yi Chiu
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Time: New course materials will be posted on Mondays
Live Session: Mondays 6pm
Discussion: Every weekday
Text: Moore, D. S., & McCabe, G. P. (2009). *Introduction to the practice of statistics (6th ed)*. New York: W. H. Freeman.
Software: *SPSS for Windows (Version 19)*. New York: Prentice-Hall.

Course Description

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. 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).

Course Requirements

1. **Email & eCollege Access:** Efficient communication is the key to evaluate how successful an online course is and in this course, **emailing** and **eCollege** are the two communication tools that we heavily rely on. To maximize the teaching and learning effects, you have to check your email account frequently and make sure you are able to receive information, download files, drop messages, join live sessions, do homework, take exams and access your grades from our webpage. All information and activities are time sensitive. Late responses and requests will not be handled. For example, we may need to vote to make a decision, and late votes will not be taken. Another example is that you will have a run of time to finish each homework assignment. However, you will not be able to access the homework questions after the designated time.

2. **Exams:** The two online exams, midterm and final, are worth 30% and 30% of the final grade, respectively.
3. **Homework assignments:** Approximately 10 homework assignments, worth 40% of the final grade, will be given online throughout the semester. Homework assignments will be assigned on **Tuesdays** and are due at the **Mondays** the week after they are assigned. So basically you have a whole week to work on a homework assignment. No late homework assignment is accepted.
4. **Participation:** Your participation is expected throughout the semester.
5. **Software & Calculator:** *SPSS for Windows* 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.

Live Sessions

Live sessions in this online course are analogous to office hours in a regular course. You can ask questions in one-to-one manner and obtain responses immediately. To efficiently organize the sessions, I would like to collect questions by Wednesday so that the sessions can be planned in advance. For those who cannot participate in the live sessions, I will record the sessions and make them available on our course page.

Discussion Sessions

In addition to live sessions, an alternative to find the solution of your question is to simply post your questions online. This is especially convenient for those who cannot participate in our live sessions. A **Basket** labeled **Question Box** will be created every week for you to drop content-related questions. Your questions will be replied on a daily basis (weekdays). Therefore, please make sure you are familiar with the **Dropbox** function.

Final Grade

Final letter grade will be assigned as follows:

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

Notes Posted Dates

The following class schedule is subject to change if necessary. Reading assignments must be completed each week.

Date	Topic	Section (pages)
Jan 23	Inference for the mean of a population	7.1 (417-433)
Jan 30	Inference for Two Population Means	7.2 (447-467)
Feb 6	Inference for Population Variances	7.3 (473-476)
Feb 13	Inference for Proportions	8.1, 8.2 (487-515)
Feb 20	Analysis of Two-Way Tables	9.1, 9.2 (525-545)
Feb 27	Simple Linear Regression I	10.1 (559-579)
Mar 5	Simple Linear Regression II	10.2 (579-594)
Mar 12	<i>No Class (Spring Recess)</i>	
Mar 19	MIDTERM EXAM (Sections 7.1 - 10.2)	
Mar 26	Multiple Regression	11.1, 11.2 (607-625)
Apr 2	One-Way ANOVA	12.1 (637-655)
Apr 9	Contrasts and Multiple Comparisons	12.2 (655-666)
Apr 16	<i>No Class (AERA/NCME)</i>	
Apr 23	Two-Way ANOVA I	13.1 (683-694)
Apr 30	Two-Way ANOVA II	13.2 (694-699)
May 7	FINAL EXAM	

Policy on Academic Integrity

Please refer to the Policy on Academic Integrity for Undergraduate and Graduate Students at <http://academicintegrity.rutgers.edu>. I will follow the policy strictly.