Statistics (440.605.51)

Fall 2018

Time: Mondays, 6:00–8:30pm
Instructor: Rich Langford
Email: rlangfo3@jhu.edu
Office Hours: By appointment

Course Outline

This course provides a general survey of statistical methodology. Topics include probability and sampling, distribution theory, hypothesis testing, estimation (Maximum Likelihood and Method of Moments), and Analysis of Variance. It is also designed to provide the requisite background for Econometrics (440.606).

Requirements

You are required to have taken a course in Calculus (or co-requisite JHU *Mathematical Methods for Economists*).

Schedule

Week	Date	Topic	Readings	Assignments
1	9/10	Descriptive Statistics	Chapters 1–3	
2	9/17	Probability Theory	Chapter 4	PS #1 Posted
3	9/24	Discrete Probability Distributions	Chapter 5	
4	10/1	Continuous Probability Distributions	Chapter 6	PS #1 Due PS #2 Posted
5	10/8	Sampling and Sampling Distributions	Chapter 7	
6	10/15	Interval Estimation	Chapter 8	PS #2 Due PS #3 Posted
7	10/22	Midterm: covers Weeks 1–6		
8	10/29	Hypothesis Testing	Chapter 9	PS #3 Due PS #4 Posted
9	11/5	Inferences about Means and Proportions with Two Populations	Chapter 10	
10	11/12	Inferences about Population Variances	Chapter 11	PS #4 Due PS #5 Posted
11	11/19	THANKSGIVING BREAK		
12	11/26	Comparing Multiple Proportions, Test of Independence, and Goodness of Fit	Chapter 12	
13	12/3	Experimental Design and Analysis of Variance	Chapter 13	PS #5 Due PS #6 Posted
14	12/10	Simple Linear Regression	Chapter 14	
15	12/17	Final Exam: covers Weeks 1–14, emphasis on Weeks 8–14		PS #6 Due

Textbook

You are required to have access to a copy of *Statistics for Business and Economics* by Anderson, Sweeny, Williams, Camm, and Cochran. I will be using the revised 13th edition, but editions as recent as the 11th edition are also acceptable.

Grading

All exams and assignments are graded on a 100-point scale. Your course grade is a weighted average of the grades received on exams and assignments. Based on your numerical course grade, your letter course grade will be <u>at least as high</u> as indicated in the following table:

Numeric Grade	Letter Grade
98–100	A+
94–97	A
90–93	A-
85–89	B+
80–84	B
75–79	B-
60–74	C
0–59	F

Problem Sets – 40%

There will be six problem sets assigned this semester. Your lowest scoring problem set will be dropped, and each of the remaining five problem sets will make up 8% of your course grade, for a total of 40%.

<u>Problem sets are due at the beginning of class, Monday at 6:00pm.</u> Please see the schedule above for problem set posting dates and due dates. If you need an extension on the due date, please email me as soon as possible, stating how much of an extension you need and why. I will grant extensions on a case-by-case basis, depending upon the nature of the situation or emergency and how far in advance the request is made.

Problem sets will receive a 5-point penalty if submitted late, and an additional 10-point penalty for every day submitted late thereafter.

You may work on problem sets in groups of two to four, and I encourage you to do so. Please list all of your group's students in the heading of your problem set and write up and submit your own set of solutions.

Midterm and Final Exam – 25% and 35%

There will be a midterm and final exam this semester, which make up 25% and 35% of your course grade, respectively. Please see the schedule above for details on what topics the midterm and final exam will cover. The exams will be limited to material in the textbook, in problem sets, and in class.

Both exams are in-class, open-book, and open-notes.

University Policies

This course adheres to all University policies described in the academic catalog. Please pay close attention to the following policies:

Students with Disabilities

Johns Hopkins University is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact the coordinator listed on the Disability Accommodations page. Further information and a link to the Student Request for Accommodation form can also be found on the Disability Accommodations page.

Ethics & Plagiarism

JHU Ethics Statement: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor. Read and adhere to JHU's Notice on Plagiarism.

Dropping the Course

You are responsible for understanding the university's policies and procedures regarding withdrawing from courses found in the current catalog. You should be aware of the current deadlines according to the Academic Calendar.

Getting Help

You have a variety of methods to get help on Blackboard. Please consult the resource listed in the "Blackboard Help" link for important information. If you encounter technical difficulty in completing or submitting any online assessment, please immediately contact the designated help desk listed on the AAP online support page. Also, contact your instructor at the email address listed in the syllabus.