

Statistics: Measurement in Economics

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Course Description

Economics 310 is a semester long course in probability and statistical inference. Probability is a branch of mathematics which provides us with a method of reasoning about uncertain environments. During the first half of the course, we will study both probability theory and its application. The theory of statistical inference provides the basis for the rigorous analysis and interpretation of numerical data obtained through random samples. The second half of the course will be spent learning how the basic tools of statistical inference work and how to use them.

Lectures and Sections

Each week there will be two lectures of 1 1/4 hours. In addition there will be a section meeting once a week in which problems sets and other issues from lecture will be discussed. Attendance is expected.

Lecture	MW 2:30-3:45	Soc Sci Rm 5206
Lab 320 (SL)	We 4:00p	Soc Sci Rm 6101
Lab 321 (EG)	Th 8:50a	Ingraham Rm 123
Lab 322 (SL)	Tu 4:00p	Soc Sci Rm 6240
Lab 323 (ZL)	Fr 8:30a	Sterling Rm 1339
Lab 324 (EG)	Th 4:00p	Soc Sci Rm 6240
Lab 325 (ZL)	Fr 9:55a	Van Hise Rm 575

Prerequisites

- a) an introductory economics course; and b) Math 211 or Math 221.

Books

The textbook for the course is:

SANDHOLM, W., AND B. SARANITI, *Vital Statistics: Probability and Statistics for Economics and Business*, to be published by Addison-Wesley.

Relevant chapters of this book are available for purchase from the Social Sciences Copy Center. Some additional copies will be held on reserve at the Social Sciences Library. Another (optional) helpful reference is:

KELLER, G., (2014), *Statistics for Management and Economics*, 10th ed., Cengage Learning.

Problems Sets

There will be eight problem sets over the course of the semester and each one will be due *before class* on the specified dates. Late assignments will not be accepted. However, the lowest problem set grade will not count toward your semester grade. Working on problems with other students can be a useful part of learning the material, but each student must write up his/her own solutions.

Exam Schedule

Midterm Exam	March 11	in class
Final Exam	May 13	5:05p

Grading

Grades will be based on the midterm exam (30%), a final exam (45%), and the problem sets (25%).

Core Topics

1. Probability Basics (Chapters 1, 2)
2. Random Variables, Expectations (Chapters 3, 4)
3. Discrete/Continuous Distributions (Chapters 5, 6)
4. Law of Large Numbers, Central Limit Theorem (Chapter 7)
5. Statistics Basics (Chapters 11, 12)
6. Point/Interval Estimation (Chapters 13, 14)
7. Hypothesis Testing (Chapter 15)

Website

<http://www.ssc.wisc.edu/~jrporter/ec310/econ310.html>

Recording

Audio and/or video recording of the class is prohibited.

Students with Disabilities

Please contact Prof. Porter during the first two weeks of the semester if you have a documented requirement for accommodation to obtain equal access to this class or to any assignment in this class.

Students with Religious Observance Conflicts

Please contact Prof. Porter during the first two weeks of semester if you have a religious observance conflict on certain dates this semester for which you will need relief.

Grievance Procedure

The Department of Economics has developed a grievance procedure through which you may register comments or complaints about a course, an instructor, or a teaching assistant. The Department continues to provide a course evaluation each semester in every class. If you wish to make anonymous complaints to an instructor or teaching assistant, the appropriate vehicle is the course evaluation. If you have a disagreement with an instructor or a teaching assistant, we strongly encourage you to try to resolve the dispute with him or her directly. The grievance procedure is designed for situations where neither of these channels is appropriate.

If you wish to file a grievance, you should go to Social Science Room 7238 and request a Course Comment Sheet. When completing the comment sheet, you will need to provide a detailed statement that describes what aspects of the course you find unsatisfactory. You will need to sign the sheet and provide your student identification number, your address, and a phone where you can be reached. The Department plans to investigate comments fully and will respond in writing to complaints.

Your name, address, phone number, and student ID number will not be revealed to the instructor or teaching assistant involved and will be treated as confidential. The Department needs this information, because it may become necessary for a commenting student to have a meeting with the department chair or a nominee to gather additional information. A name and address are necessary for providing a written response.

Academic Misconduct

Academic Integrity is critical to maintaining fair and knowledge based learning at UW Madison. Academic dishonesty is a serious violation: it undermines the bonds of trust and honesty between members of our academic community, degrades the value of your degree and defrauds those who may eventually depend upon your knowledge and integrity.

Examples of academic misconduct include, but are not limited to: cheating on an examination (copying from another student's paper, referring to materials on the exam other than those explicitly permitted, continuing to work on an exam after the time has expired, turning in an exam for regrading after making changes to the exam), copying the homework

of someone else, submitting for credit work done by someone else, stealing examinations or course materials, tampering with the grade records or with another student's work, or knowingly and intentionally assisting another student in any of the above. Students are reminded that online sources, including anonymous or unattributed ones like Wikipedia, still need to be cited like any other source; and copying from any source without attribution is considered plagiarism.

The Dept. of Economics will deal with these offenses harshly following UWS14 procedures (<http://students.wisc.edu/saja/misconduct/UWS14.html>): 1. The penalty for misconduct in most cases will be removal from the course and a failing grade, 2. The department will inform the Dean of Students as required and additional sanctions may be applied. 3. The department will keep an internal record of misconduct incidents. This information will be made available to teaching faculty writing recommendation letters and to admission offices of the School of Business and Engineering.

If you think you see incidents of misconduct, you should tell your instructor about them, in which case they will take appropriate action and protect your identity. You could also choose to contact our administrator Tammy Herbst -Koel (therbst@wisc.edu) and your identity will be kept confidential.

Note to Economics Majors

If you would like to discuss career options and career skills learned as an economics major, you are encouraged to email the Department Career Coordinator, Elizabeth Foste at foste@wisc.edu.