Suleyman Ozmucur
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Office Hours: Tuesday, 1:00-3:00, Wednesday 1:00-3:00

Objectives and Prerequisites
The course focuses on elementary probability and inferential statistical techniques. The course begins with a survey of basic descriptive statistics and data sources and then covers elementary probability theory, sampling, estimation, hypothesis testing, correlation, and regression. The course focuses on practical issues involved in the substantive interpretation of economic data using the techniques of statistical inference. For this reason, empirical case studies that apply the techniques to real-life data are stressed and discussed throughout the course, and students are required to perform several statistical analyses of their own.

Prerequisites: Economics 1 and 2, Mathematics 104 and either 114 or 115. Economics 103 cannot be taken by any student who has already completed statistics at least at the level of Stat 101 (including the sequence Stat 111/112). Students who have one semester of statistics must take the second course in statistics or Economics 220 (or Economics 103, if Stat 111 was taken) to satisfy the statistics requirement of the major. Students are strongly advised to take the second course in statistics, rather than Economics 220. (Students with a one semester AP Statistics credit for Stat 101 or higher can drop the credit in order to take Economics 103 via a release form available from the department.)

Lecture and Office Hours
Lecture Hours:
Monday: 11:00 - 12:00, Vance B10
Wednesday: 11:00 - 12:00, Vance B10
Friday: 11:00 - 12:00, Vance B10

Office Hours (McNeil 343):
Tuesday, 1:00-3:00
Wednesday, 1:00 - 3:00
Textbooks and Other References

Required:

Recommended:

Sources on the web:

Exams
There will be a mid-term exam and a final exam. All examinations are closed book. A calculator is required for all exams.

Midterm Exam (February 23rd, Wednesday)
Final Exam (to be scheduled by the Registrar; preliminary Monday, May 2, 8:30-10:30)
(Tentative schedule by the Registrar http://www.upenn.edu/registrar/timetable/tfinals.html)
See final exam rules: http://www.econ.upenn.edu/Undergraduate/FinalExamRules.htm

Homework Problems (Newbold, Carlson and Thorne)
2.5, 2.6, 2.19, 2.20, 2.21, 2.23, 2.31,
3.1, 3.6, 3.7
4.1, 4.2, 4.4, 4.5, 4.10, 4.11, 4.37, 4.38, 4.53, 4.54
5.1, 5.5, 5.6, 5.8, 5.9, 5.20, 5.21, 5.22, 5.23, 5.47, 5.48
6.1, 6.2, 6.9, 6.10, 6.11, 6.12, 6.13, 6.39, 6.40, 6.41
7.1, 7.2, 7.4, 7.5, 7.6, 7.7, 7.21, 7.23, 7.25, 7.38, 7.39, 7.41
8.1, 8.3, 8.4, 8.8, 8.9, 8.11, 8.12, 8.13, 8.21, 8.22, 8.23, 8.30, 8.31, 8.36, 8.37, 8.45, 8.46, 8.50, 8.51
10.1, 10.2, 10.3, 10.4, 10.8, 10.9, 10.12, 10.13, 10.14, 10.15, 10.19, 10.20, 10.21, 10.23, 10.28, 10.29, 10.30, 10.31, 10.33, 10.34
17.3, 17.5, 17.7, 17.11, 17.13, 17.15, 17.21, 17.23, 17.25, 17.27, 17.35, 17.37, 17.39, 17.41

Grading
The final grade for the course will be based on attendance, homework assignments, a midterm exam, and a final exam:
Homework assignments (10%)
Midterm Exam (February 23rd, Wednesday) (40%)
Final Exam (to be scheduled by the Registrar; preliminary Monday, May 2, 8:30-10:30) (50%)

Course Outline

1. Descriptive Statistics and Data Analysis
   Newbold, Carlson and Thorne, Chps. 1, 2, 3
   Berk & Carey, Chps. 1-4

2. Probability
   Newbold, Carlson and Thorne, Chp. 4

3. Probability Distributions
   Newbold, Carlson and Thorne, Chp. 5
   Berk & Carey, pp. 169-179

4. Normal Distribution
   Newbold, Carlson and Thorne, Chp. 6
   Berk & Carey, pp. 179-190

5. Sampling Distributions
   Newbold, Carlson and Thorne, Chp. 7
   Berk & Carey, pp. 192-201

6. Point and Interval Estimation
   Newbold, Carlson and Thorne, Chp. 8.1 - 8.4, 8.8
   Berk & Carey, pp. 209-216

7. Hypothesis Testing
   Newbold, Carlson and Thorne, Chp. 9
   Berk & Carey, pp. 217-227

8. Simple Regression
   Newbold, Carlson and Thorne, Chp. 10
   Berk & Carey, Chp. 8, 9

9. Multiple Regression
   Newbold, Carlson and Thorne, Chp. 11
   Berk & Carey, Chp. 8, 9

10. Time Series Analysis and Forecasting
    Newbold, Carlson and Thorne, Chp. 17
    Berk & Carey, Chp. 11