Probability and Statistical Inference ECON 3640-002
Instructor: Sophie Wu
Class time: M, W, 11:50 am – 1:10 pm
Classroom: ST 205
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Office hours: by appointment

Objective
This statistics course fulfills the QB requirement for general education. It aims to equip
students with statistical tools and fundamental knowledge of data analysis. Numerical examples
demonstrated in my lecture intend to give students a general idea regarding how statistics is applied
to real business problems.

The course primarily covers three main themes in statistics:
(1) descriptive statistics (ch 1, 2, 3, 4)
(2) discrete and continuous probability distributions (ch 5, 6, 7, 8)
(3) statistical inference based on the knowledge of probability distribution (ch 9, 10, 11, 12, 13)

By the end of the semester, students are expected to carry statistical techniques for
independent research.

Textbook
Gerald Keller Wilfrid Laurier University
ISBN-10: 1285425456

Grade Weights
Assignments: 30%
Midterms: 40%   (Three midterms are scheduled on 09/22, 10/22, 11/24.)
Final Exam: 30%  (In-class final exam is scheduled on Dec. 19th, 10:30 am-12:30 pm.)

Tentative Grade Scale:
A: 90 or above    A-: 85 or above   B+: 80 or above    B: 75 or above
B-: 70 or above   C+: 65 or above   C: 60 or above    C-: 50 or above
E: < 50
The grade scale may be adjusted based on the class performance.

Tentative Schedules
Week 1
08/25                                              introduction (ch 1)
08/27                                              descriptive statistics (ch 2-4)

Week 2
09/01                                              labor day, no class
09/03                                              descriptive statistics (ch 2-4)

Week 3
09/08                                              descriptive statistics (ch 2-4)
09/10                                              normal distribution and the concept of continuous distribution
                                                    (ch 8-1, ch 8-2)
Week 4
09/15 assignment 1 review
09/17 optional

Week 5
*09/22 exam 1
09/24 discrete probability (ch 6-7)

Week 6
09/29 discrete probability (ch 6-7)
10/01 discrete probability (ch 6-7)

Week 7
10/06 discrete probability (ch 6-7)
10/08 discrete probability (ch 6-7)

Week 8
10/13 Fall break
10/15 Fall break

Week 9
10/20 optional
*10/22 exam 2

Week 10
10/27 continuous probability distribution (ch 8)
10/29 data collection and sampling (ch 5)

Week 11
11/03 estimation (ch 9-ch 10)
11/05 estimation (ch 9-ch 10)

Week 12
11/10 estimation (ch 9-10)
11/12 estimation (ch 9-10)

Week 13
11/17 statistical inference (ch 11-13)
11/19 statistical inference (ch 11-13)

Week 14
*11/24 exam 3 (ch 9-ch 10)
11/26 statistical inference (ch 11-13)

Week 15
12/01 statistical inference (ch 11-13)
12/03 statistical inference (ch 11-13)

Week 16
12/08 statistical inference (ch 11-13)
12/10 statistical inference (ch 11-13)
Policies and Rules

1. Students need to take the exams on the scheduled dates. No make-up exam will be given for any reasons. Late assignment submission will result a mark of zero.
2. Plagiarism and any forms of cheating are prohibited. If caught, the case will be directly reported to the department and university without any negotiation.