



### EC313 Introduction to Statistics

<b>Instructor Information</b>	<p>Manzhan Gu Home Institution: Shanghai University of Finance &amp; Economics Email: gu.manzhan@mail.shufe.edu.cn Office Hours: Determined by Instructor</p>		
<b>Term</b>	<p>June 27, 2022 - July 22, 2022</p>	<b>Credits</b>	4 units
<b>Class Hours</b>	Monday through Friday, 120 mins per teaching day		
<b>Discussion Sessions</b>	2.5 hours each week, conducted by teaching assistant(s)		
<b>Total Contact Hours</b>	66 contact hours (1 contact hour = 45 mins, 3000 mins in total)		
<b>Required Texts (with ISBN)</b>	<p>Business Statistics—A First Course, David Levine, Kathryn Szabat, and David Stephan, 7th edition (global edition), ISBN 10: 1-29-209593-8. ISBN 13: 978-1-292-09593-6 (Print) ISBN 13: 978-1-292-09602-5 (PDF)</p>		
<b>Prerequisite</b>	N/A		



## Course Overview

This course is an introduction to the basic concepts and procedures behind probability and statistics. Some of the topics covered are descriptive statistics, experimental design, regression, probability, discrete random variables including the binomial distribution, the normal distribution, confidence intervals, hypothesis tests for a single parameter, inference on two samples and the chi-square distribution to test goodness-of-fit and independence. Knowledge in calculus is preferred.

## Learning Outcomes

After the course, students should learn some basics concepts and methods in statistics to analyze simple problems in business.

## Grading Policy

Quizzes and Homework	30%
Midterm Examination	30%
Final Examination	40%

## Grading Scale is as follows

Number grade	Letter grade	GPA
90-100	A	4.0
85-89	A-	3.7
80-84	B+	3.3
75-79	B	3.0
70-74	B-	2.7
67-69	C+	2.3
65-66	C	2.0
62-64	C-	1.7
60-61	D	1.0
≤59	F (Failure)	0



## Class Schedule

Date	Lecture	Readings
Day 1	Introduction, Defining and collecting data	Chapter 1
Day 2	Organizing and visualizing variables	Chapter 2
Day 3	Numerical description measures	Chapter 3
Day 4	Basic probability 1	Chapter 4
Day 5	Basic probability 2	Chapter 4
Day 6	Discrete probability distribution	Chapter 5
Day 7	Normal distribution	Chapter 6
Day 8	Sample distribution	Chapter 7
Day 9	Midterm review	
Day 10	<b>Midterm Examination</b>	Chapter 1-7
Day 11	Confidence interval estimation	Chapter 8
Day 12	Fundamentals of hypothesis testing: one sample tests	Chapter 9
Day 13	Two-sample tests	Chapter 10
Day 14	One-way ANOVA	Chapter 10
Day 15	Chi-square tests	Chapter 11
Day 16	Simple linear regression 1	Chapter 12
Day 17	Simple linear regression 2	Chapter 12
Day 18	Multiple regression	Chapter 13
Day 19	Final Review	
Day 20	<b>The Final Examination</b>	Chapter 1-13