



蘇州大學  
Soochow University

# Soochow University

## STA 201 Statistics

Summer 2021

### Course information

**Course Credits:** 4

**Contact Hours:** 55 hours

**Class Time:** 8:30 - 10:20

**Instructor:** TBA

**Course Format:** Online

### Course Description

This course provides an introduction of the descriptive and inferential statistics and data analysis strategies. This course will begin with a brief overview of statistics, data, and statistical thinking, then topics include the basic concepts of elementary probability, discrete and continuous probability distributions, sampling distributions, estimation, and hypothesis testing will be illustrated. By the end of this course, students are expected to have a general understanding of what statistics represent, how to use statistics to organize and display data, and how to draw valid inferences based on data by using appropriate statistical tools

### Prerequisite(s)

None



## Learning Objectives

Upon completion of this course, students will be able to:

1. Understand the basic concepts in probability and statistics;
2. Build a foundation in probability theory and statistical inference;
3. Apply probabilistic and statistical methods to solve practical problems;
4. Describe a data set including both categorical and quantitative variables to support or refute a statement;
5. Perform statistical inference in different circumstances and interpret the results in an applied context;
6. Use mathematical tools to study probability and mathematical statistics and in the description and development of statistical procedures.

## Methodology

Methodology	Hours	Hours of work During class	Hours of work After class
Online Video	50	88 hours (60%)	
Online Forum Discussion	8		
Assessment	30		
Personal study	30		68 hours (40%)
Tasks	22		
Practical teaching preparation	10		
Bibliographic search	6		
<b>Total</b>	<b>156</b>	<b>88</b>	<b>68</b>



### Textbook(s)

James T. McClave, P. George Benson, Terry Sincich, *Statistics for Business and Economics*, Pearson Education, Inc., 12th edition

### Tasks and Evaluation

Participation	10%
2 Assignments	20% (10% for each)
2 Quizzes	20% (10% for each)
Midterm Test	20%
Final Exam	30%

Students are required to attend online classes on the scheduled time. Missing classes without permission will lead to decrease in overall grade.

- Missing less than two classes: no penalty.
- Missing more than two classes: 7% will be taken off from the overall grade.

Online forum discussion is required. Students are required to post at least one question and answer at least one question on the forum weekly.

Online Tutorials are mandatory. Students will read and discuss academic articles provided. Students will also discuss the case studies for the week's lectures. Each Tutorial will be 1 hour.

All exams will be held online and the time of each exam will be limited to 1 hour. Exams must also be taken at the scheduled time. There will be no make-up exams



## Rating system:

### 1. Assessment

ASSESSMENT ITEM	PERCENT OF FINAL GRADE
Participation	10%
2 Assignments	20% (10% for each)
2 Quizzes	20% (10% for each)
Midterm	20%
Final exam	30%

### 2. Grading Scale

A+ 96-100	A 90-95	A- 85-89
B+ 82-84	B 78-81	B- 75-77
C+ 71-74	C 66-70	C- 62-65
D 60-61	F < 60	

## Course Content

Week	Lesson	Content
1	1	Introduction
	2	Statistics, Data, and Statistical Thinking
	3	Methods for Describing Sets of Data
	4	Probability
	5	Probability (Cont.) <b>Quiz 1 due</b>
2	6	Random Variables and Probability Distributions



	7	Sampling Distributions
	8	Inferences Based on a Single Sample: Estimation with Confidence Intervals
	9	Inferences Based on a Single Sample: Estimation with Confidence Intervals (Cont.)
	10	Midterm Review and Q&A ( <i>Zoom Meeting</i> ) <b>Assignment 1 due</b>
3	11	<b>Midterm Test</b>
	12	Inferences Based on a Single Sample: Tests of Hypotheses
	13	Inferences Based on Two Samples: Confidence Intervals and Tests of Hypotheses
	14	Inferences Based on Two Samples: Confidence Intervals and Tests of Hypotheses (Cont.)
	15	Design of Experiments and Analysis of Variance
4	16	Design of Experiments and Analysis of Variance (Cont.) <b>Quiz 2 due</b>
	17	Categorical Data Analysis
	18	Simple Linear Regression
	19	Simple Linear Regression (Cont.)
	20	Multiple Regression and Model Building <b>Assignment 2 due</b>
5	21	Methods for Quality Improvement: Statistical Process Control
	22	Time Series: Descriptive Analysis, Models, and Forecasting
	23	Nonparametric Statistics
	24	Final Exam Reviews and Q&A ( <i>Zoom Meeting</i> )
	25	<b>Final Exam</b>



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## University Regulations and Services

Soochow University highly values the academic integrity and aims to promote the academic fairness, honesty and responsibility. Any academic dishonesty behaviors and any attempts to cheats and plagiarism will be reported to the university administration office. A written warning and the relevant penalties will be imposed. The record might be shown on the official university transcript.

Soochow University also highly respects students' accommodation for disabilities and religions. You might contact the Student Accessibility Office if you have any questions, concerns or if you would like to report any offensive behaviors.

Note:

Please contact the University Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material.