



蘇州大學
Soochow University

Soochow University

STA 209 Statistical Methods

Summer 2021

Course information

Course Credits: 4

Contact Hours: 55 hours

Class Time: 8:30 - 10:20

Instructor: TBA

Course Description

This course provides students with empirical research skills and techniques, focusing on describing sets of data, probability, random variable and probability distributions. This course covers the following topics: fundamental elements of statistics, types of data, collecting and describing data, conditional probability, and distributions.

Prerequisite(s)

Introduction to Statistics



Learning Objectives

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

1. Develop the understanding of statistical concepts and techniques;
2. Use statistical tools like R or SAS to analyze data;
3. Collect and describe data and sets of data independently;
4. Analyze case study and produce written reports.

Methodology

Methodology	Hours	Hours of work Face-to-face	Hours of work Non Face-to-face
Lectures	50	88 hours (60%)	
Practice teaching	8		
Assessment	30		
Personal study	30		68 hours (40%)
Tasks	22		
Practical teaching preparation	10		
Bibliographic search	6		
Total	156	88	68

Textbook(s)

A First Course in Statistics by James T. McClave & Terry Sincich, 12th edition, Pearson Education Limited, 2018 Inc. Press.



Tasks and Evaluation

2 Assignments	40%
Midterm Test	25%
Final Exam	35%

According to the Soochow University Classroom Attendance Policy, class attendance is required. Students who miss the class for more than 2 times will get a penalty as 15% deduction from the cumulative grade. If the instructor reports a student's frequent missing of class to the Soochow University Academic Administration Office, the student might get a written warning and might be prohibited from attending final exam.

Assignments and quizzes are based on the course contents and questions discussed in class. Assignments should be completed in a T-account format. Every quiz is around 20-minute long. All quizzes must be completed before the due day. There will not be make-up quizzes.

Tentatively, midterm test will cover lec 1-10. The final exam will be in the last class. Every test is around 2-hour long. Note that there will be NO make-up tests and exams. Only non-programmable calculators can be used in the tests and exam. Any attempts to use electronic devices like cellphone, iPad, iWatch, laptops, ect. will be seemed as cheating.

Rating system:

1. Assessment

ASSESSMENT ITEM	PERCENT OF FINAL GRADE
Assignments	40% (20% per assignment)
Midterm	25%
Final exam	35%



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	Course Introduction The Science of Statistics
	2	Types of Statistical Applications
	3	Fundamental Elements of Statistics
	4	Types of Data
	5	Collecting Data: Sampling and Related Issues
2	6	Methods for describing Sets of data Assignment 1
	7	Describing qualitative data Graphical methods for describing quantitative data Numerical measures of central tendency
	8	Numerical measures of variability Using the mean and standard deviation to describe data
	9	Events, Sample Spaces, and Probability
	10	Conditional Probability



3	11	Midterm Test
	12	Two Types of Random Variables
	13	Probability Distributions for Discrete Random Variables
	14	Probability Distributions for Continuous Random Variables
	15	Approximating a Binomial Distribution with a Normal Distribution (Optional)
4	16	inferences based on a Single Sample Assignment 2
	17	Identifying and Estimating the Target Parameter
	18	Confidence Interval for a Population Variance (Optional)
	19	The Elements of a Test of Hypothesis
	20	A Nonparametric Test about a Population Median (Optional)
5	21	Comparing Population Means
	22	Comparing Population Proportions
	23	Simple linear Regression
	24	Final exam review
	25	Final Exam



蘇州大學
Soochow University

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.