



蘇州大學
Soochow University

SOS 220 Foundations of Social Science Statistics

Winter 2024

Course Credits: 4

Contact Hours: 56 hours

Instructor: TBA

Email: TBA

COURSE OBJECTIVES

This introductory course delves into the fundamental principles of modern statistics, with a specific focus on applications and examples within the social and behavioral sciences. Students will acquire a comprehensive understanding of essential statistical concepts and techniques, equipping them with the analytical skills necessary for interpreting and conducting research in social science disciplines. Topics include methods for describing and summarizing data, probability, random sampling and more.

Upon Completion of this Course, students will be able to:

1. Gain a solid understanding of basic statistical concepts such as variables, data types, and measurement scales;
2. Learn various methods of data collection relevant to social sciences, including surveys, experiments, and observational studies;
3. Examine the foundational assumptions and principles that underlie empirical methodologies and discoveries;
4. Gain proficiency in hypothesis testing and understand its role in making inferences about population parameters from sample data;
5. Develop critical thinking skills to evaluate statistical claims and research findings in the social sciences.

PREREQUISITES

N/A



GRADING

Grades will be determined by accumulating points, with 100 points being the maximum, as follows:

| ITEM | POINTS |
|-----------------------------|------------|
| 2 Quizzes | 20 Points |
| 2 Labs | 30 Points |
| Midterm | 20 Points |
| Final Presentation and Exam | 30 Points |
| Total | 100 Points |

Late submissions will be graded at the end of the course. Grades will be assigned according to the following rule:

$$A \geq 90 > B \geq 80 > C \geq 70 > D \geq 60 > F.$$

We reserve the right to make adjustments to the overall grading policy.

COURSE MATERIALS

Required Texts:

Renee R. Ha; James C. Ha, *Integrative Statistics for the Social and Behavioral Sciences*, 1st Edition, SAGE Publications.

Recommended (Optional) Texts or Other Materials:

None

COURSE TOPICS

| MODULE | TASKS |
|----------|--|
| Module 1 | Topics: Topic 1: Descriptive Statistics Topic 2: Descriptive Versus Inferential Statistics Topic 3: Inferential Statistics Topic 4: How Are Samples Randomly Selected? Assessments: Quiz#1 |



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|----------|--|
| Module 2 | Topics: Topic 5: Sampling Distribution of the Mean and the Single-Sample z Statistic Topic 6: Probability Topic 7: Normal Curve Topic 8: Standardized Scores Assessments: Lab#1 Stat-minds Discovery Lab |
| Module 3 | Topics: Topic 9: Frequency Distributions and Graphing Topic 10: Measurement Scales Topic 11: Sampling Distribution of the Mean and the Single-Sample z Statistic Topic 12: Hypothesis Testing Assessments: Midterm Quiz#2 |
| Module 4 | Topics: Topic 13: Measures of Central Tendency Topic 14: Performing a Contingency Table Analysis Topic 15: Analysis of Variance (ANOVA) Topic 16: Complex ANOVA Designs Assessments: Lab#2 Contingency Quest Workshop |
| Module 5 | Topics: Topic 17: Correlation and Regression Topic 18: Linear Regression Topic 19: Multiple Regression Topic 20: Assumptions for the Chi-Square and Contingency Table Tests (χ^2) Assessments: Final Exam Final Presentation |

ATTENDANCE

1) Class attendance is required. 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.

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.



2) Participants in this course are expected to arrive in class promptly and adequately prepared. The primary objective of this course is to critically engage with the readings and the subject matter. Therefore, course participants are expected to have completed the reading prior to class and prepare thoughtful reflections/commentaries to share with fellow colleagues.

LEARNING REQUIREMENTS

- 1) Late assignments are not acceptable and are subjected to grade deductions.
- 2) Assignments submitted in the wrong format will be counted as not submitted.
- 3) Failure to submit or fulfill any required course component results in failure of the class.
- 4) Make-up for midterm and final exams only with valid excuses, as defined by the University.
- 5) In order to earn a Certificate of Completion, participants must thoughtfully complete all assignments by stated deadlines and earn an average quiz score of 50% or greater.

TECHNOLOGY POLICY

The use of electronic devices in class is distracting, both for the user and for the rest of the class. Only non-programmable calculators can be used in the tests and exam. Any attempts to use cell phones and other electronic communication devices will be seemed as cheating. Laptops are discouraged, unless you use them for activities DIRECTLY related to the course (eg., note taking, reading course documents).

ACADEMIC INTEGRITY POLICY

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.

DISABILITY ACCOMMODATION



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Soochow University is committed to maintaining a barrier-free environment so that students with disabilities can fully access programs, courses, services, and activities at Soochow University. Students with disabilities who require accommodations for access to and/or participation in this course are welcome.

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.