



蘇州大學
Soochow University

ENG 404 Statistical and Actuarial Communication Strategies Winter 2024

Course Credits: 4

Contact Hours: 56 hours

Instructor: TBA

Email: TBA

COURSE OBJECTIVES

This course is designed to equip students with the essential communication skills required to excel in these disciplines. This course focuses on the art of translating complex statistical and actuarial concepts into clear, accessible, and persuasive communication for both technical and non-technical audiences. Recognizing the crucial role of effective communication in translating complex statistical and actuarial concepts into actionable insights, this course focuses on developing strategies to convey technical information clearly and persuasively.

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

1. Develop a strong foundation in effective communication, including written, verbal, and visual communication techniques
2. Develop skills in presenting complex statistical and actuarial concepts to both technical and non-technical audiences
3. Understand the diverse needs of stakeholders and learn how to tailor communication strategies to different audiences
4. Explore advanced techniques in data visualization to effectively communicate statistical and actuarial findings
5. Analyze and discuss real-world examples and case studies where effective communication played a critical role in decision-making processes within statistical and actuarial contexts

PREREQUISITES

ENG 221 Academic Writing; MAT 309 Applied Linear Models



GRADING

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

| ITEM | POINTS |
|---------------------|------------|
| Writing Assignments | 20 Points |
| Reports | 20 Points |
| Midterm 1 | 15 Points |
| Midterm 2 | 15 Points |
| Final 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:

1. Andrew F. Hayes, *Statistical Methods for Communication Science*, 1st Edition, Routledge.
2. Howard S. Becker, *Writing for Social Scientists: How to Start and Finish Your Thesis, Book, or Article*, 2nd Edition, University of Chicago Press.

Recommended (Optional) Texts or Other Materials:

None

COURSE TOPICS

| MODULE | TASKS |
|----------|---|
| Module 1 | <p>Topics:</p> <p>Topic 1: Persona and Authority</p> <p>Topic 2: One Right Way</p> <p>Topic 3: Editing by Ear</p> <p>Topic 4: Learning to Write as a Professional</p> <p>Assessments:</p> |



| | |
|----------|--|
| | Writing Assignment#1 |
| Module 2 | Topics: Topic 5: The Writing Process Topic 6: Qualitative Data versus Quantitative Measurement Topic 7: Statistics and Communication Science Topic 8: Graphical and Tabular Descriptions of Data Assessments: Writing Assignment#2 Report#1 |
| Module 3 | Topics: Topic 9: Describing Association Between Quantitative Variables Topic 10: Pearson's Coefficient of Correlation Topic 11: Fundamentals of Probability Topic 12: Assessing and Quantifying Reliability Assessments: Midterm#1 Report#2 |
| Module 4 | Topics: Topic 13: The Definition of Reliability Under Classical Test Theory Topic 14: Parameter Estimation Topic 15: Interval Estimates Topic 16: Hypothesis Testing Concept Assessments: Midterm#2 |
| Module 5 | Topics: Topic 17: Testing a Hypothesis About a Single Mean Topic 18: Bootstrapping the p-value Topic 19: Comparing Two Independent Groups Topic 20: Simple Linear Regression Assessments: Final Exam |

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.



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DISABILITY ACCOMMODATION

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.