STAT 1152: INTRODUCTION TO MATHEMATICAL STATISTICS

Spring 2024 Course Syllabus

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Lecture Hours

Section 1: Monday 8:15-11:00 am, 3-106
Section 2: Tuesday 8:15-11:00 am, 3-102

Instructor

Dr. Xiaomei Tan
Email: xiaomei.tan@scupi.cn
Office: 3-317B, Liberal Arts Building
Office Hours: Thursday 8:30-11:30 am, 1:30-4:30 pm
Contact Instructor:
- Attend office hour or via email
- Extra office hours will be offered by appointment.

Teaching Assistants

Xinyi Yan (Section 1)
Email: 2243363885@qq.com

Qingyue Deng (Section 2)
Email: 2020141520203@stu.scu.edu.cn

TA Responsibilities: TAs primarily support the instructor across a range of tasks, including grading homework, recording attendance, addressing student inquires, and contributing to the smooth functioning of educational environments.
Contact TAs: QQ Group (see QR code on last page) or via email

Note:
- Modifications to this syllabus may occur. Please stay informed about any revisions announced during class or on the Blackboard website. Lecture materials, reading lists, grading details, and announcements will all be accessible through Blackboard.
- Important dates and information will be announced during class. Students should stay informed about announcements on Blackboard and via emails sent to their SCU email address.
- While emailing the instructor or TAs, please kindly include **"STAT 1152"** in the subject line for efficient communication. Please use your university email account (student_ID_number@stu.scu.edu.cn), as emails from other sources could be caught by the SCU spam filter.

Textbook

Walpole R. E., Myers R. H., Myers S. L., & Ye K. (2012). *Probability & Statistics for Engineers & Scientists* (9th ed.). Prentice Hall. (Available on Blackboard)

Course Description

This course is continued from STAT 1151, "Introduction to Probability", and introduces the elementary concepts of statistical inference, which are essential for advanced statistical methods. Topics include sampling distributions, point and interval estimation, hypothesis testing, regression, and analysis of variance.

Prerequisites

STAT 1151 Introduction to Probability

Course Objectives

This course aims to:
- Provide a solid introduction to the mathematical theory underlying statistical methods;
- Ensure understanding of real-world use of statistics.

Learning Outcomes

Upon successful completion of this course, students will be able to:
- Formulate real-world scenarios into statistical problems using mathematical terms;
- Identify and apply suitable statistical methods for problem resolution;
- Understand the implications and limitations of different statistical methods;
- Develop skills in analytical reasoning and solving issues within statistical data analysis.

Grading

- Attendance: 10%
- Homework: 20%
- Midterm exams: 40%
- Final exam: 30%

Course grades are assigned based on a 100-point scale. The numerical equivalence to letter grades is as follows:

Total Scores	Grades	Total Scores	Grades
>=90	A	>=70	C+
>=85	A-	>=66	C
>=80	B+	>=63	C-
>=76	B	>=60	D
>=73	B-	Below 60	F

*Round up policy: For example, if you get a final score of 89.5, we will round it up to 90. If you get 89.4 unfortunately, we are not able to round it up to 90. We keep this rule the across all students.

Attendance

Attendance at lectures is mandatory. **Missing Three or more sessions will result in a loss of all the attendance points. Absences of five or more will lead to failure (F grade) in the course.** To monitor attendance, in-class exercises will be conducted periodically. **NO makeup in-class exercises will be permitted.**

Homework

[Due] Homework will be distributed periodically throughout the semester and due at the subsequent class, 8:15 am. Only TWO late homework is allowed if submitted within 24 hours after the due. **Other late homework will NOT be accepted**, unless certified medical proof is given. It is advised that assignments be submitted in advance of the designated deadline to avoid any potential lateness. It is the students' responsibility to ensure accurate and timely submission.

[Submission] Each assignment must be submitted in **one PDF format file through the Blackboard**. Please answer the problems according to the order of problems assigned. (Notes: The homework can be typed or handwritten to take photos. The HW done on iPad can be directly generated by the software to generate PDF files, and the handwritten work can be merged to generate PDF as well.)

[Naming Format] Student ID Name. (Example: 2020141520203邓晴月)

[Grading Criteria] The full score of each assignment is 100 points. Five points will be lost if you fail to submit it in the correct format and order of the problems. Extra points will be lost if you miss answering problems.

[HW Solution] Generally speaking, HW solutions will be posted on Blackboard within the week after the due.

Exams

Exams are scheduled following the course timetable. **Closed book, closed notes. A single A4-sized cheat sheet is allowed** with content handwritten on both sides.

Attendance for exams is mandatory. In case of foreseeable absences, it is the students' responsibility to inform the instructor **one week prior to the event** and provide **written verification** of the reason for missing the event. For unforeseen emergencies, it is the students' responsibility to provide written verification **within one week after the event**. Makeup exams will be arranged as needed. Failure to give prior notice for an absence will result in a "**ZERO**" score, except in exceptional cases.

Class Policy

1. Class participation
Regular class attendance as well as active participation in course activities is expected. It is the students' responsibility to complete all assigned in-class tasks. Any required student absences should be reported to the instructor in advance via email or if not possible in advance, shortly thereafter.

2. Academic integrity
Academic integrity is the pursuit of scholarly activity in an open, honest, and responsible manner. In this course, students are expected to uphold the dignity, rights, and property of their peers. All exam work and homework must be a product of individual effort. **Any violation of academic integrity, including uncredited copying or closely paraphrasing others' work, as well as exam cheating, will not be tolerated.** The minimum penalty for academic dishonesty is a one-letter grade deduction.

Tentative Course Schedule (February 26, 2024)

Week	Monday	Tuesday	Topic
1	2/26	2/27	Introduction to Statistics (Chapters 1, 8)
2	3/4	3/5	One- and Two-Sample Estimation Problems (Chapter 9)
3	3/11	3/12	One- and Two-Sample Estimation Problems (Chapter 9)
4	3/18	3/19	One- and Two-Sample Tests of Hypotheses (Chapter 10)
5	3/25	3/26	One- and Two-Sample Tests of Hypotheses (Chapter 10)
6	TBD		Midterm Exam (No class)
7	4/8	4/9	Simple Linear Regression and Correlation (Chapter 11)
8	4/15	4/17	Simple Linear Regression and Correlation (Chapter 11)
9	4/22	4/23	Multiple Linear Regression and Certain Nonlinear Regression Models (Chapter 12)
10	4/29	4/30	Multiple Linear Regression and Certain Nonlinear Regression Models (Chapter 12)
11	TBD		Midterm Exam (No class)
12	5/13	5/14	One-Factor Experiments (Chapter 13)
13	5/20	5/21	One-Factor Experiments (Chapter 13)
14	5/27	5/28	Factorial Experiments (Two or More Factors) (Chapter 14)
15	6/3	6/4	Nonparametric Statistics (Chapter 16)
16	6/10	6/11	Statistical Quality Control (Chapter 17); Bayesian Statistics (Chapter 18)
17	6/17	6/18	Review
18	TBD		Final Exam (No class)

QQ group for sections 1&2:

STAT1152 24Spr...
群号: 914539893

扫一扫二维码，加入群聊

QQ