MATH 678: Stat Methods in Data Science

Fall *2024 Course Syllabus*

NJIT Academic Integrity Code

Links to an external site.: All Students should be aware that the Department of Mathematical Sciences takes the University Code on Academic Integrity at NJIT very seriously and enforces it strictly. This means that there must not be any forms of plagiarism, i.e., copying of homework, class projects, or lab assignments, or any form of cheating in quizzes and exams. Under the University Code on Academic Integrity, students are obligated to report any such activities to the Instructor.

COURSE INFORMATION

Course Description: This course introduces students to concepts in statistical methods used in data science, including data collection, data visualization and data analysis. Emphasis is on model building and statistical concepts related to data analysis methods. The course provides the basic foundational tools on which to pursue statistics, data analysis and data science in greater depth. Topics include sampling and experimental design, understanding the aims of a study, principles of data analysis, linear and logistic regression, resampling methods, and statistical learning methods. Students will use the R statistical software.

Number of Credits: 3

Prerequisites: MATH 661

Links to an external site. or MATH 663

Links to an external site., or permission by instructor.

Course-Section and Instructors:

Course-Section	**Instructor**
Math 678-101	Professor Z. Shang

Office Hours for All Math Instructors: Spring 2024 Office Hours and Emails Links to an external site.

My office: Culm 210

Office hour: by appointment

Required Textbook: https://www.statlearning.com/

Title	*An Introduction to Statistical Learning: with Applications in R*
Author	Gareth James, et al
Edition	1st (2013 ed.)
Publisher	Springer
ISBN #	978-1461471370

University-wide Withdrawal Date: The last day to withdraw with a **W** is **Monday, November 11, 2024**. It will be strictly enforced.

POLICIES

DMS Course Policies: All DMS students must familiarize themselves with, and adhere to, the Department of Mathematical Sciences Course Policies Links to an external site., in addition to official university-wide policies Links to an external site.. DMS takes these policies very seriously and enforces them strictly.

Grading Policy: The final grade in this course will be determined as follows:

Quizzes	20 %
Midterm	40

Exam	%
Final Exam	40 %

Your final letter grade will be based on the following tentative curve.

A: 93-100

A-: 90-92

B : 85-89

B-: 80-84

C: 70-79

C-: 60-70

F: 0-59

Attendance Policy: Attendance at all classes will be recorded and is **mandatory**. Please make sure you read and fully understand the Math Department's Attendance Policy

Links to an external site..

Quiz: The quiz is about 20-30 minutes.

Cheating in Exams: Once caught, the exam will be assigned zero points. To prevent cheating, please leave at least one seat empty between you and your neighbors.

Exams: There will be one exam during the semester and a non-cumulative final exam during the final exam week:

Midterm Exam	October 23, 2024, CULM 111
Final Exam Period	December 15?, 2024, CULM 111

The final exam will test your knowledge of all the course material taught in the entire course. Make sure you read and fully understand the Math Department's Examination Policy

Links to an external site.. This policy will be strictly enforced.

Makeup Exam Policy: There will be **NO MAKE-UP QUIZZES OR EXAMS** during the semester. In the event an exam is not taken under rare circumstances where the student has a legitimate reason for missing the exam, the student should contact the Dean of Students office and present written verifiable proof of the reason for missing the exam, e.g., a doctor's note, police report, court notice, etc. clearly stating the date AND time of the mitigating problem. The student must also notify the Math Department Office/Instructor that the exam will be missed.

Cellular Phones: All cellular phones and other electronic devices must be switched off during all class times.

ADDITIONAL RESOURCES

Further Assistance: For further questions, students should contact their instructor. All instructors have regular office hours during the week. These office hours are listed on the Math Department's webpage for Instructor Office Hours and Emails

Links to an external site..

Accommodation of Disabilities: The Office of Accessibility Resources and Services (OARS) offers long term and temporary accommodations for undergraduate, graduate and visiting students at NJIT.

If you are in need of accommodations due to a disability please If you need an accommodation due to a disability please contact the Office of Accessibility Resources and Services at oars@njit.edu. The office is located in Kupfrian Hall, Room 201. A Letter of Accommodation Eligibility from the Office of Accessibility Resources and Services office authorizing your accommodations will be required.

For further information regarding self identification, the submission of medical documentation and additional support services provided please visit the Office of Accessibility Resources and Services (OARS) website at:

https://www.njit.edu/accessibility/