

MATH 225-102: Survey of Probability and Statistics

Spring 2021 Course Syllabus

NJIT Academic Integrity Code: 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: Topics include descriptive statistics, elements of probability, random variables and distributions; mean and variance; introduction to estimation and inference. This course satisfies the Mathematics GUR in probability and statistics. However, degree credit will not be granted for both **MATH 225** and any other upper level course in probability and/or statistics.

Number of Credits: 1

Prerequisites: **MATH 112** with a grade of C or better or **MATH 133** with a grade of C or better.

Course-Section and Instructors

Course-Section	Instructor
Math 225-102	Professor K. Carfora

Office Hours for All Math Instructors: [Spring 2021 Office Hours and Emails](#)

Required Textbook:

Title	<i>Elementary Statistics: A Step by Step Approach</i>
Author	Bluman, Allan G.
Edition	7th
Publisher	McGraw Hill
ISBN #	978-0-07-353497-8

Note: You do NOT need to purchase a textbook. A PDF will be provided to you in Canvas.

University-wide Withdrawal Date: The last day to withdraw with a W is **Monday, April 5, 2021**. 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](#), in addition to official [university-wide policies](#). DMS takes these policies very seriously and enforces them strictly.

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

Homework and Quizzes	15%
Midterm Exam I	25%
Midterm Exam II	25%
Final Exam	35%

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

A	90 - 100	C	65 - 74
B+	85 - 89	D	55 - 64
B	80 - 84	F	0 - 54
C+	75 - 79		

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](#). This policy will be strictly enforced.

This course requires the use of **Respondus LockDown Browser and/or Respondus Monitor with a webcam for online exams**. The webcam can be built into your computer or can be the type that plugs in with a USB cable. Please see the LockDown Browser document in Canvas for more information.

Homework and Quiz Policy: Homework will be assigned at the completion of each topic. This homework will be collected and graded. Quizzes will be given approximately every week.

Exams: There will be two midterm exams held in class during the semester and one comprehensive final exam. Exam dates will be given in class while the final exam will take place during the following week:

Midterm Exam II	Week 5
Midterm Exam II	Week 10
Final Exam	May 7 - 13, 2021

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](#). 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.

Additional Information: If attending class in person, bring a charged laptop and power cord to class. See the Class Info document on Canvas for additional information regarding course policies.

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

ADDITIONAL RESOURCES

Math Tutoring Center: Located in the Central King Building, Lower Level, Rm. G11 (See: [Spring 2021 Hours](#))

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](#).

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

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 contact Chantonette Lyles, Associate Director of the Office of Accessibility Resources and Services at [973-596-5417](tel:973-596-5417) or via email at lyles@njit.edu. The office is located in Kupfrian Hall, Room 201. A Letter of Accommodation Eligibility from the Office of Accessibility Resources and Services 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/studentsuccess/accessibility/>

Important Dates (See: [Spring 2021 Academic Calendar](#), [Registrar](#))

Date	Day	Event
January 19, 2021	T	First Day of Classes
January 23, 2021	S	Saturday Classes Begin
January 25, 2021	M	Last Day to Add/Drop Classes
March 14 - March 21, 2021	Su - Su	Spring Recess - No Classes
April, 2, 2021	F	Good Friday - No Classes
April 5, 2021	M	Last Day to Withdraw
May 4, 2021	T	Friday Classes Meet
May 4, 2021	T	Last Day of Classes
May 5 & May 6, 2021	W & R	Reading Days
May 7 - May 13, 2021	F - R	Final Exam Period

Course Outline

Week	Sections	Topic
1	3.1 - 3.2	Intro to Statistics, Data Summary
2	2.1 - 2.2, 3.3 - 3.4	Stem-and-Leaf Diagram, Histogram, Box Plot
3	4.1 - 4.3	Probability
4	5.1 - 5.2	Discrete Probability Distributions
5		MIDTERM 1
6	5.3	Binomial Distribution

7	6.1 - 6.2	Normal Distribution
8	6.3	Central Limit Theorem
9	7.1 - 7.2	Statistical Hypotheses
10		MIDTERM 2
11	8.1	Intro to Hypothesis Testing
12	8.2 - 8.3	Hypothesis Testing
13	8.2 - 8.3	Hypothesis Testing
14		Catch Up and Review
MAY 7 - 13, 2021		FINAL EXAM

*Updated by Professor K. Carfora - 1/13/2021
Department of Mathematical Sciences Course Syllabus, Spring 2021*
