NJIT New Jersey's Science & Technology University

THE COLLEGE OF SCIENCE AND LIBERAL ARTS

THE DEPARTMENT OF MATHEMATICAL SCIENCES

MATH 135: Mathematics for Business
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.

(Description)

COURSE INFORMATION

Course Description: Intended for students with major offered by SOM. An introduction to mathematics of business, principles of differential and integral calculus, and optimization.

Number of Credits: 3

Prerequisites: MATH 107 with a grade of C or better or MATH 110 with a grade of C or better or NJIT placement.

Course-Section and Instructors

Course-Section	Instructor
Math 135	Professor M. Hercules

Office Hours for All Math Instructors: Spring 2021 Office Hours and Emails

Required Textbook:

Title	*Introductory Mathematical Analysis for Business, Economics, and the Life and Social Sciences*
Author	E. F. Haeussler, Jr., R. S. Paul, R. J. Wood
Edition	13th
Publisher	Pearson
ISBN #	978-0321643728
Notes	w/ MyMathLab

University-wide Withdrawal Date: The last day to withdraw with a **W** is **Monday, April 5, 2021**. It will be strictly enforced.

COURSE GOALS

Course Objectives: An introduction to mathematics of business, principles of differential and integral calculus, and optimization.

Course Assessment: The assessment of objectives is achieved through homework, quizzes, and common examinations with common grading.

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:

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**	66 - 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.

Homework Policy: There will be homework assignments to complete during the semester. The assignments and their due dates will be given in class.

Quiz Policy: Every week there will be a short quiz on the topics presented the previous week. **There are no make-up quizzes**. In case of an ***excused*** absence, the quiz will not be included in the final grade.

Exams: There will be two midterm exams held in class during the semester and one comprehensive final exam. Exams are held on the following days:

Midterm Exam I	Week 5
Midterm Exam II	Week 9
Final Exam Period	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.

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 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 Accessibilty 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 Witdraw
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

Lecture	Sections	Topic	Homeworkd

1	0.5	Factoring	p.20: 1-49 multiples of 3.
	0.6	Fractions	p. 26: 1-45 multiples of 3.
	0.8	Quadratic Equations	p. 40: 1-27 multiples of 3. 55, 57
2	2.1	Functions	p.86: #5-29, 31, 37, 39, 45-49
	2.2	Special Functions	p.90: #17-22, 29-33
3	4.1	Exponential Functions	p.184: #1-11 odd, 15, 18-31, 47-49
	4.2	Logarithmic Functions	p.191: #1-8, 17-56, 58, 59, 61, 63
4	5.1	Compound Interest	p. 212: #1-13, 19-21
	EXAM 1 - REVIEW		
5	**MIDTERM EXAM 1**		
6	10.1	Limits	p.467: #1-4, 9-34, 37-40
	10.2	One-Sided Limit	p.475: #1-54
	10.3	Continuity	pg. 481, #1-34
7	11.1	The Derivative	pg. 481, #1-34
	11.2	Rules for Differentiation	p.507: #1-88
	11.3	The Derivative as a Rate of Change	p.516: #3, 10, 13-26, 32-39, 41- 42, 45
8	11.4	The Product Rule and the Quotient Rule	p.525: #1-4, (maybe 5, 6, 11, 12), 20-22, 25, 27, 32, 49-51, 54-56, 58, 71
	11.5	Rules: The Chain Rule	p.532: #1-38, 41-44, 55-73; all skipped problems considered bonuses
	EXAM 2 - REVIEW		
9	**MIDTERM EXAM 2**		
10	13.1	Relative Extrema	p.586: #1-18, 35, 37, 53-61, 68, 69, 71
	13.2	Absolute Extrema on a Closed Interval	pg. 590, #1-8, 12
11	13.3	Concavity	p.596: #1-15 (skip 11), 17-20 (skip 19), 23-24, 35, 37-39, 42-43, 45, 47-48, 53
	13.6	Applied Maxima & Minima	p.616: #1-7, 11-13, 15, 18-19, 21-22, 24, 27, 30
12	14.2	The Indefinite Integral	p.636: #1-20, 23-31, 33, 37-47, 49, 50, 52
	14.3	Integration with Initial Conditions	pg. 641, #1-4, 9-16, 21
13	14.7	The Fundamental Theorem of Integral Calculus	p.665: 1-18, 20, 27, 59-60, 61, 63
	15.4	Average Value of a Function	p.707: 1-5, 7-10
14	***FINAL EXAM REVIEW*** **/ CATCH UP**		
15	**FINAL EXAM**		