NJIT
New Jersey's Science &
Technology University

**THE COLLEGE OF SCIENCE
AND LIBERAL ARTS**

THE DEPARTMENT OF MATHEMATICAL SCIENCES

MATH 138: General Calculus
Summer 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: Intended for students who are not in Science or in Engineering. An introduction to differential and integral calculus of a single variable.

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 138-140	Professor M. Herculues

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

Required Textbook:

Title	*Calculus: Concepts and Contexts bundled w/ WebAssign*
Author	Stewart
Edition	4th
Publisher	Cengage
ISBN #	978-0495557425

Withdrawal Date: Please see the Summer 2021 Academic Calendar for the last day to withdraw based on the summer session you are registered for.

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	10%
Midterm Exam I	25%
Midterm Exam II	25%
Final Exam	40%

Your final letter grade will be based on the following tentative curve. **NOTE**: This course needs to be passed with a grade of C or better in order to proceed to Math 238 or Math 246.

A	90 - 100	C	70 - 74
B+	85 - 89	D	60 - 69
B	80 - 84	F	0 - 59
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.

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

Midterm Exam I	Week 5
Midterm Exam II	Week 11
Final Exam	TBA

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, Room G11 (See: Summer 2021 Hours)

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: Summer 2021 Academic Calendar, Registrar)

Date	Event
May 24, 2021	First Day of Classes for **FIRST, MIDDLE, AND FULL SUMMER SESSIONS**
May 26, 2021	Last Day to Add/Drop Classes for **FIRST SUMMER SESSION**
May 28, 2021	Last Day to Add/Drop Classes for **MIDDLE SUMMER SESSION**
May 31, 2021	Last Day to Add/Drop Classes for **FULL SUMMER SESSION**
May 31, 2021	University Closed for Memorial Day
June 28, 2021	Last Day of **FIRST SUMMER SESSION**
June 29, 2021	First Day of **FTF AND SUMMER SESSION**
July 4, 2021	University Closed for Independence Day
July 5, 2021	University Closed for Independence Day
July 7, 2021	First Day of **FTF SUMMER SESSION**
July 19, 2021	Last Day of **MIDDLE SUMMER SESSION**
August 2, 2021	Last Day of **FULL SUMMER SESSION**
August 16, 2021	Last Day of **FTF SUMMER SESSION**

Course Outline

Week	Section	Title	Homework
1	1	Review	
2	2.2	The Limit of a Function	ex. 3, 4, 5, 6, 13, 14, 15, 16
	2.3	Calculating Limits Using the Limit Laws	ex. 1, 2, 9 – 24
3	2.5	Limits Involving Infinity	ex. 3, 4, 5, 7, 15, 16, 17, 19, 20, 22, 23, 24
	2.6	Derivatives and Rates of Change	ex. 5, 7, 9ab, 13, 15, 43ab, 45, 47
4	2.7	The Derivative as a Funciton	ex. 3, 4, 5, 6, 14, 15, 16
		Review for Midterm 1	
5		**MIDTERM 1**	
6	3.1	Derivatives of Polynomials and Ecponential Functions	ex. 3 – 28, 45, 49, 50,
	3.2	The Product and Ouotient Rules	ex. 3 – 15, 29, 30, 33a, 35a, 39,
7	3.3	Derivatives of Trigonometric Functions	ex. 1 – 14, 19 – 22, 23a, 25a, 27, 28, 31
	3.4	Chain Rule	ex. 7 – 30, 37, 38
8	3.5	Implicit Differentiation	ex. 3 – 16, 21 – 28

	3.7	Derivatives of Logarithmic Functions	ex. 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14
9	3.8	Rates of Change in the Natural and Social Sciences	ex. 1, 4, 7, 8, 9, 10, 11a, 12a, 13ab, 14, 15, 16ab
	4.1	Related Rates	ex. 2 – 23 odd
10	4.2	Minimum and Maximum Values	ex. 3, 5, 23, 25, 27, 29, 41 – 51 odd
		Review for Midterm 2	
11		**MIDTERM 2**	
12	4.3	Derivatives and Shapes of Curves	ex. 7 – 16, 21 – 26
	4.6	Optimization Problems	ex. 5, 6, 9 – 12, 14, 15, 18, 23, 40
13	4.8	Antiderivatives	ex. 1 – 16, 19 – 26
14	5.1	Definite Integral	
15		Review for Final Exam	