MATH 138: General Calculus I
Fall 2025 Course Syllabus

NJIT Academic Integrity Code: Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: NJIT Academic Integrity Code.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu

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 138-003	Professor A. Flax

Office Hours for All Math Instructors: Fall 2025 Office Hours and Emails

Required Textbook:

Title	*Calculus: Concepts and Contexts*
Author	Stewart
Edition	5th
Publisher	Cengage

ISBN #	9780357632499 (Book Only)
	9780357756911 (Bundle with Webassign)
Notes	Webassign will not be used.

University-wide Withdrawal Date: The last day to withdraw with a **W** is **Monday, November 10, 2025**. 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	15%
Quizzes	15%
Midterm Exam I	20%
Midterm Exam II	20%
Final Exam	30%

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.

Religious Observance: NJIT is committed to supporting students observing religious holidays. Students must notify their instructors in writing of any conflicts between course requirements and religious observances, ideally by the end of the second week of classes and no later than two weeks before the anticipated absence.

Homework: Homework is an expectation of the course. The problems listed in the syllabus are to be handed in.

Quiz Policy: There will be 10 to 13 quizzes given throughout the semester. They will be based on the lecture, homework and the in-class discussions.

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

Midterm Exam I	October 14, 2025
Midterm Exam II	November 11, 2025
Final Exam Period	December 14 - December 20, 2025

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.

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Artificial Intelligence: This course expects students to work without artificial intelligence (AI) assistance in order to better develop their skills in this content area. As such, AI usage is not permitted throughout this course under any circumstance.

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: Fall 2025 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.

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 need an accommodation due to a disability, please contact the Office of Accessibility Resources and Services at oars@njit.edu, or visit Kupfrian Hall 201 to discuss your specific needs. A Letter of Accommodation Eligibility from the office authorizing student accommodations is 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/

Important Dates (See: Fall 2025 Academic Calendar, Registrar)

Date	Day	Event
September 1, 2025	Monday	Labor Day
September 2, 2025	Tuesday	First Day of Classes
September 8, 2025	Monday	Last Day to Add/Drop Classes
October 2, 2025	Thursday	Wellness Day - No Class
November 10, 2025	Monday	Last Day to Withdraw
November 25, 2025	Tuesday	Thursday Classes Meet
November 26, 2025	Wednesday	Friday Classes Meet
November 27 to November 30, 2025	Thursday to Sunday	Thanksgiving Recess - Closed
December 11, 2025	Thursday	Last Day of Classes
December 12, 2025	Friday	Reading Day 1
December 13, 2025	Saturday	Saturday Classes Meet
December 14 to December 20, 2025	Sunday to Saturday	Final Exam Period

Course Outline

Lecture #	Section #	Subject Topic and Homework (HW) Assignment	
1	2.2	The Limit of a Function	2.2 ex: 4, 6, 14, 16
2	2.3	Calculating Limits using Limit Laws	2.3 ex: 12, 16,17, 18, 20, 24, 26
3	2.5	Limits Involving Infinity	2.5 ex: 4, 16, 20, 26, 28, 30
4	2.6	Derivatives and Rates of Change	2.6 ex: 6, 8, 11 (a, b and c), 14
5	2.7	The Derivative as a Function	2.7 ex: 14, 22, 24, 27, 33

6	3.1	Derivatives of Polynomials and Exponential Functions	3.1 ex: 4, 6, 9, 12, 15, 16, 19, 22, 24, 38
7	3.2	Product and Quotient Rules	3.2 ex: 3, 5, 6, 7, 8, 10, 15, 20, 22, 34
8		Review of Trigonometry	HW assigned in class
9	3.3	Derivatives of Trigonometric Functions	3.3 ex: 2, 3, 5, 8, 11, 15, 26, 32
10	3.4	Chain Rule	3.4 ex: 4, 5, 7, 9, 12, 13, 16, 23, 38, 53
11		**CATCH UP AND REVIEW FOR EXAM 1**	
12		**EXAM 1**	
13	3.5	Implicit Differentiation	3.4 ex: 8, 10, 12, 14, 17, 20, 33
14	3.7	Derivatives of Log Functions	3.7 ex: 4, 6, 7, 10, 12, 14, 52
15	3.8	Rates of Change in the Natural and Social Sciences	3.8 ex: 8,10,13 (a and b), 14
16	4.1	Related Rates	4.1 ex: 4,6,11, 12, 40
17	4.2	Max and Min Values	4.2 ex: 6, 24, 26, 47, 48, 51
18	4.3	Derivatives and Shapes of Curves	4.3 ex: 9, 20, 22, 24, 50
19		**CATCH UP AND REVIEW FOR EXAM 2**	
20		**EXAM 2**	

21	4.5	Indeterminate forms and L'Hopital's Rule	4.5 ex: 12, 14, 15, 16, 18, 20, 21, 23, 31, 46
22	4.6	Optimization Problems	4.6 ex: 5, 6, 14, 15, 17
23	4.8	Antiderivatives	4.8 ex: 2, 5, 6, 11, 13, 14, 16, 31, 34, 40, 41
24	5.1	Areas and Distances	5.1 ex: 3, 6, 14
25	5.2	The Definite Integral	5.2 ex: 48,52,56
26	5.3	Evaluating Definite Integrals	5.3 ex: 1, 2, 6, 8, 9, 12, 16, 20, 28
27	5.4	The Fundamental Theorem of Calculus	5.4 ex: 8, 9, 14, 16, 19, 22
28		**CATCH UP AND REVIEW FOR FINAL EXAM**	
		FINAL EXAM	