MATH 138: General Calculus I
Summer 2022 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 138-141	Professor T. Sherman

Office Hours for All Math Instructors: Office Hours and Emails

Required Textbook:

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

University-wide Withdrawal Date: Please see the Summer 2022 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	15%
Homework	15%
Midterm Exam I	20%
Midterm Exam II	20%
Final Exam	30%

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

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 two 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	July 19, 2022

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: Summer 2022 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 Scott Janz, Associate Director of Disability Support Services at 973-596-5417 or via email at scott.p.janz@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/studentsuccess/accessibility/

Important Dates (See: Summer 2022 Academic Calendar, Registrar)

Date	Day	Event
May 23, 2022	Monday	**Full, First, and Middle** Summer Session Begins
May 25, 2022	Wednesday	Last Day to Add/Drop for **First Summer** Session
May 27, 2022	Friday	Last Day to Add/Drop for **Middle Summer** Session
May 30, 2022	Monday	Last Day to Add/Drop for **Full Summer** Session
May 30, 2022	Monday	Memorial Day - University Closed/No Classes Scheduled
June 11, 2022	Saturday	Last Day to Withdraw from **First Summer** Session
June 17, 2022	Friday	Last Day to Withdraw from **Middle Summer** Session
June 27, 2022	Monday	Last Day of Classes for **First Summer** Session
July 1, 2022	Friday	Last Day to Withdraw from **Full Summer** Session
July 3, 2022	Sunday	Independence Day - University Closed/No Classes Scheduled
July 4, 2022	Monday	Independence Day - Holiday Observance/No Classes
July 5, 2022	Tuesday	Second Summer Session Begins
July 6, 2022	Wednesday	Last Day to Add/Drop for Second Summer Session

July 18, 2022	Monday	Last Day of Classes for Middle Summer Session
July 21, 2022	Thursday	Last Day to Withdraw for Second Summer Session
August 8, 2022	Monday	Last Day of Classes for Full and Second Summer Session

Course Outline

Lecture #	Section #	Subject Topic	Homework (HW) Assignment
1	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*
2	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*
3	2.7	*The Derivative as a Function*	*ex. 3, 4, 5, 6, 14, 15, 16*
		Review for Midterm 1	
4	3.1	*Derivatives of Polynomials and Exponential Functions*	*ex. 3 - 28, 45, 49, 50*
	3.2	*The Product and Quotient Rules*	*ex. 3 - 15, 29, 30, 33a, 35a, 39*
5	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*
6		*Midterm 1*	
7	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*
8	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*
9	4.2	*Minimum and Maximum Values*	*ex. 3, 5, 23, 25, 27, 29, 41 - 51 odd*
	4.3	*Derivatives and Shapes of Curves*	*ex. 7 - 16, 21 - 26*
10		*Midterm 2*	
11	4.6	*Optimization Problems*	*ex. 5, 6, 9 - 12, 14, 15, 18, 23, 40*
	4.8	*Antiderivatives*	*ex. 1 - 16, 19 - 26*

12	5.1	*Areas and Distances*	*ex. 1-2*
	5.2	*The Definite Integral*	*ex. 5*
13	5.3	*Evaluating Definite Integrals*	*ex. 4, 10, 14, 24*
	5.4	*Fundamental Theorem of Calculus*	*ex. 8, 24*
14		*Final Exam*	

Updated by Professor T. Sherman - 4/26/2022
Department of Mathematical Sciences Course Syllabus, Summer 2022