

MATH 135: Calculus for Business *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: An introduction to mathematics of business, principles of differential and integral calculus, and optimization. Effective From: Fall 2013.

Number of Credits: 3

Prerequisites: Intended for students with major offered by SOM. Prerequisite: Math 107 with a grade of C or better or Math 108 with a grade of C or better or NJIT placement.

Course-Section and Instructors

Course-Section	Instructor
Math 135-001	Professor M. Potocki-Dul

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	(Notes)

University-wide Withdrawal Date: Please note that the last day to withdraw with a W is **November 3, 2014**. 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:

Quizzes	15%
Homework	10%
Midterm Exam I	15%
Midterm Exam II	15%
Midterm Exam III	15%
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 246**.

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.

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

Calculus is learned by solving problems. Homework assignments are completed online. The online assignments can be completed at **WWW.MYMATHLAB.COM** or **WWW.COURSECOMPASS.COM**. In order to access the online assignments you need to have a student access code. Access codes are included with new book that is bundled with MyMathLab; codes can be purchased separately from the textbook at the campus bookstore or online at the course website. If you buy a new book from another source make sure it is bundled with MyMathLab. In addition, on the first day of class your course instructor will give you an additional code needed to access the online assignments. NOTE: Homework Assignments are DUE frequently (at least weekly) at the dates and times specified online and by your instructor.

How to get started with MyMathLab:

- http://m.njit.edu/Undergraduate/UG-Files/MML_Getting_Started.pdf
- http://m.njit.edu/Undergraduate/UG-Files/Technology_Tips.pdf

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 three exams held during the semester and one comprehensive final exam. Exams are held on the following days:

Exam I	September 24, 2014
Exam II	October 27, 2014
Exam III	November 24, 2014
Final Exam	December 15 - 19, 2014

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. Please note that calculators, cellular phones, beepers, and all other electronic devices may NOT be used during any exam.

Makeup Exam Policy: There will be NO MAKE-UP EXAMS during the semester. In the event the Final Exam is not taken, under rare circumstances where the student has a legitimate reason for missing the final exam, a makeup exam will be administered by the math department. In any case the student must notify the Math Department Office and the Instructor that the exam will be missed and present written verifiable proof of the reason for missing the exam, e.g., a doctors note, police report, court notice, etc., clearly stating the date AND time of the mitigating problem.

ADDITIONAL RESOURCES

Further Assistance: For further questions, students should contact their instructor. All instructors have regular office hours during the week. These office hours are listed at the Math Department link. Teaching Assistants are also available in the [Math Learning Center](#).

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.

Important Dates (See: [Fall 2014 Academic Calendar, Registrar](#))

Date	Day	Event
September 2, 2014	T	First Day of Classes

September 8, 2014	M	End of Add/Drop Period
November 3, 2014	M	Last Day to Withdraw
November 25, 2014	T	Thursday Classes Meet
November 26, 2014	W	Friday Classes Meet
November 27 - 30, 2014	R - S	Thanksgiving Recess Starts
December 10, 2014	W	Last Day of Classes
December 11 & 12, 2014	R & F	Reading Days
December 15 - 20, 2014	M - S	Final Exam Period

Course Outline

Week #	Lecture	Section #	Topic	Assignment
1	1	2.1	Functions	p.86: #5-29, 31, 37, 39, 45-49
		2.2	Special Functions	p.90: #17-22, 29-33
2	2	4.1:	Exponential Functions	p.184: #1-4, 11, 13-16, 18-31, 47-49
3	3	4.2	Logarithmic Functions	p.191: #1-8, 17-56, 58, 59, 61, 63
		5.1	Compound Interest	p. 212: #1-10, 13, 19-21
4	4	5.2	Present Value	p.216: #1-13
	5	5.4	Annuities	p.227: #5-16, 18-20, 22
5	6	10.1	Limits	p.467: #1-4, 9-34, 37-40
		10.2	One-Sided Limit	p.475: #1-54
			EXAM 1 - REVIEW	
			MIDTERM EXAM 1	SEPTEMBER 24
6	7	10.3	Continuity	pg. 481, #1-34
	8	10.3	Continuity	pg. 481, #1-34
7	9	11.1	The Derivative	pg. 499, #3-25; Bonus 15, 17, 18, 22
	10	11.2	Rules for Differentiation	p.507: #1-88
8	11	11.2	Rules for Differentiation	p.507: #1-88
	12	11.3	Derivative as a Rate of Change	p.516: #3, 10, 13-26, 32-39, 41- 42, 45
9	13	11.4	The Product and Quotient	p.525: #1-4, (maybe 5, 6, 11, 12), 20-22, 25, 27, 32?

				, 49-51, 54-56, 58, 71
	14	11.5	Rules The Chain Rule	p.532: #1-38, 41-44, 55-73; all skipped problems considered bonuses
			EXAM 2 - REVIEW	
			MIDTERM EXAM 2	OCTOBER 27
10	15	11.5	The Chain Rule	p.532: #1-38, 41-44, 55-73; all skipped problems considered bonuses
11	16	13.1	Relative Extrema	p.586: #1-18, 35, 37, 53-61, 68, 69, 71
	17	13.2	Absolute Extrema on a Closed Interval	pg. 590, #1-8, 12
12	18	13.3	Concavity	p.596: #1-15 (skip 11), 17-20 (skip 19), 23-24
	19	13.3	Concavity	p.596: 35, 37-39, 42-43, 45, 47-48, 53
13	20	13.6	Applied Maxima & Minima	p.616: #1-7, 11-13, 15, 18-19, 21-22, 24, 27, 30
	21	14.2	Indefinite Integral	p.636: #1-20, 23-31, 33, 37-47, 49, 50, 52
			REVIEW FOR EXAM #3	
			MIDTERM EXAM 3	NOVEMBER 24
14	22	14.3	Integration (initial cond.)	pg. 641, #1-4, 9-16, 21
	22	14.7	The Fundamental Theorem of Calculus	p.665: 1-18, 20, 27, 59-60, 61, 63
	23	15.4	Average Value of a Function	p.707: 1-5, 7-10
15	24	7.1	Linear Inequalities	p.298: 9-23 odd
	25	7.2	Linear Programming	p.305: 1-11 odd
16	26		REVIEW FOR FINAL EXAM	
FINALS			FINAL EXAM	DECEMBER 15 - 19, 2014