MATH 112: Calculus II
Winter 2021-2022 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: Topics include integration, applications of integration, series, exponential and logarithmic functions, transcendental functions, polar coordinates, and conic sections. Effective From: Spring 2012.

Number of Credits: 4

Prerequisites: Students MUST have passed the same course at NJIT with a grade of "D" or better and are repeating the course to improve their grade.

Course-Section and Instructors:

Course-Section	Instructor
Math 112-W01	Professor J. Ratnaswamy

Days, Times, and Locations:

Days	Times	Locations
M, T, W, R, F	9:00AM - 11:45PM	CKB 125
M, T, W, R, F	12:45PM - 3:15PM	CKB 125

Required Textbook:

Title	*Thomas' Calculus: Early Transcendentals*
Author	Hass, Heil, and Weir
Edition	14th
Publisher	Pearson

ISBN #	978-0134768496

University-wide Withdrawal Date: The last day to withdraw with a **W** is **Wednesday, January 5, 2022**. It will be strictly enforced.

COURSE GOALS

Course Objectives:

- Students should (a) learn about limits and their central role in calculus, (b) learn about derivatives and their relationship to instantaneous rates of change, (c) understand many practical applications of derivatives, (d) gain experience in the use of approximation in studying mathematical and scientific problems, (e) learn about integrals: their origin in the area problem and their relationship to derivatives.
- Students should gain an appreciation for the importance of calculus in scientific, engineering, computer, and other applications.
- Students should gain experience in the use of technology to facilitate visualization and problem solving.

Course Outcomes

- Students have improved logical thinking and problem-solving skills.
- Students have a greater understanding of the importance of calculus in science and technology.
- Students are prepared for further study in mathematics as well as science, engineering, computing, and other areas.

Course Assessment: The assessment of objectives is achieved through quizzes and examinations.

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	25%
Midterm Exam	35%
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 subsequent courses such as Math 211, Math 213, or Math 222.

A	88 - 100	**C**	65 - 71
B+	83 - 87	**D**	60 - 64
B	77 - 82	**F**	0 - 59
C+	72 - 76		

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. Students are expected to attend class. Each class is a learning experience that cannot be replicated through simply "getting the notes."

Homework Policy: Homework is a requirement for this class. Online homework will be completed with MyMathLab, which comes with a new copy of the textbook. Access to it can also be purchased directly from the website.

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

Midterm Exam	January 3, 2022
Final Exam	January 14, 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

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.

Important Dates (See: Winter 2021-2022 Academic Calendar, Registrar)

Date	Day	Event
December 27, 2021	Monday	Winter Session Classes Begin
December 28, 2021	Tuesday	Last Day to Add/Drop Classes
December 31, 2021	Friday	Classes still in Session
January 1, 2022	Saturday	New Years Eve - Classes still in Session
January 5, 2022	Wednesday	Last Day to Withdraw
January 14, 2022	Friday	Last Day of Winter Session/Final Exams

January 15, 2022	Saturday	Inclement Weather Make-Up Day, if necessary

Course Outline

Day	Date	Section
Mon	12/27	*5.6, 6.1, 6.2*
Tues	12/28	*6.3, 6.4, 6.5, 7.3*
Wed	12/29	*8.1, 8.2, 8.3, 8.4*
Thurs	12/30	*8.5, 8.6, 8.7*
Fri	12/31	*8.8, REVIEW*
Mon	1/3	***MIDTERM EXAM***
Tues	1/4	*10.1, 10.2*
Wed	1/5	*10.3, 10.4*
Thurs	1/6	*10.5, 10.6*
Fri	1/7	*10.7, 10.8*
Mon	1/10	*10.9, 10.10*
Tues	1/11	*11.1, 11.2, 11.3*
Wed	1/12	*11.4, 11.5*
Thurs	1/13	*REVIEW*
Fri	1/14	*FINAL EXAM*

Updated by Professor J. Ratnaswamy - 11/4/2021
Department of Mathematical Sciences Course Syllabus, Winter 2021-22