NJIT New Jersey's Science & Technology University

THE COLLEGE OF SCIENCE AND LIBERAL ARTS

THE DEPARTMENT OF MATHEMATICAL SCIENCES

MATH 112-W01: Calculus II
Winter 2020 - 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.

DMS Online Exam Policy: Exams will be proctored using both Respondus LockDown Browser+Monitor and Webex. Students will be required to join a Webex meeting from their phone with their cameras on, and to access the exam through LockDown Browser on a Mac or Windows PC with webcam. Students must follow all instructions related to environment checks and camera positioning.

Please be sure you read and fully understand our DMS Online Exam Policy.

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 - 11:45AM	Online via WebEx
M, T, W, R, F	12:45PM - 3:15PM	Online via WebEx

Required Textbook:

Title	*Thomas' Calculus: Early Transcendentals*
Author	Thomas

Edition	14th
Publisher	Pearson
ISBN #	978-0134768496
Notes	w/ MyMathLab

University-wide Withdrawal Date: Please note that the last day to withdraw with a **W** is Wednesday, January 6, 2021 . 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	35%
Final	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.

New Policy for Exams and Quizzes: Exams will be proctored using both Respondus LockDown Browser+Monitor and Webex. Students will be required to join a Webex meeting from their phone with their cameras on, and to access the exam through LockDown Browser on a Mac or Windows PC with webcam. Students must follow all instructions related to environment checks and camera positioning. At the beginning of the semester, the DMS Exam Coordinator will provide students with a demonstration video and instructions of expected behavior and procedures, including what is expected in an environment check. Quizzes: Quizzes will be given approximately once a week throughout the semester. They will be based on the lecture, homework and the in-class discussions. Quizzes will be administered in Canvas using the same method of proctoring as described in the DMS Policy for Exams and Quizzes. Students will have approximately 20 minutes to write solutions to their quiz, and then must upload their written work within 5 minutes of completing the quiz. If a student experiences difficulty uploading their work to Canvas, they MUST email their work to their instructor immediately.

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

Midterm Exam	January 4, 2021
Final Exam	January 15, 2021

Exams will occur during class time. 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 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

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.

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Important Dates (See: Winter 2020-21 Academic Calendar, Registrar)

Date	Day	Event
December 23, 2020	W	Winter Session Classes Begin

December 24 - 25, 2020	R, F	Christmas Eve/Day - No Classes/University Closed
December 26, 2020	Sa	Last Day to Add/ Drop
Jananuary 1, 2021	F	New Years Day - No Classes/ University Closed
January 6, 2021	W	Last Day to Withdraw
January 15, 2021	F	Last Day of Winter Session/ Final Exams

Course Outline

Day	Date	Section
Wed	12/23	5.6, 6.1, 6.2
Mon	12/28	6.3, 6.4, 6.5, 7.3
Tues	12/29	8.1, 8.2, 8.3, 8.4
Wed	12/30	8.5, 8.6, 8.7
Thurs	12/31	8.8, REVIEW
Mon	1/4	**MIDTERM EXAM**
Tues	1/5	10.1, 10.2
Wed	1/6	10.3, 10.4
Thurs	1/7	10.5, 10.6
Fri	1/8	10.7, 10.8
Mon	1/11	10.9, 10.10
Tues	1/12	11.1, 11.2, 11.3
Wed	1/13	11.4, 11.5
Thurs	1/14	REVIEW
Fri	1/15	**FINAL EXAM**

Updated by Professor J. Ratnaswamy - 12/21/2020
Department of Mathematical Sciences Course Syllabus, Winter 2020-21