MATH 346: Mathematics of Finance 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: The main topics include basic problems in interest, annuities, certain amortization and sinking funds, bonds and related securities.

Number of Credits: 3

Prerequisites: MATH 112 with a grade of C or better or MATH 133 with a grade of C or better.

Course-Section and Instructors:

Course-Section	Instructor
Math 346-003	Professor S. Mahmood

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

Required Textbook:

Title	*Theory of Interest*
Author	Kellison
Edition	3rd
Publisher	McGraw-Hill
ISBN #	978-0073382449

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 and Quizzes	20%
Midterm Exam I	25%
Midterm Exam II	25%
Final Exam	30%

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

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.

Verification of Presence:
In the new verification of presence process, students will be self-reporting their presence.
The Canvas section for each of your courses will automatically be populated with an "Academic Engagement Assignment" on August 30th, 2025. Completion of this assignment will serve as verification of presence for the given student

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 and Quizzes: Homework will be assigned weekly. Short quizzes based on homework and lecture material will be given frequently. Makeup quizzes will not be offered, but the lowest quiz grade will be dropped.

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

Midterm Exam I	October 9, 2025
Midterm Exam II	November 13, 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.

Technological Requirements: If the course delivery mode changes to converged learning or synchronous online, students will need access to a computer with a webcam. Exams will be proctored using ProctorU. Quizzes will be proctored using Respondus LockDown Browser+Monitor. Students must follow all instructions related to environment checks and camera positioning.

Cellular Phones: All cellular phones and other electronic devices must be switched off during all class times.

Use of Artificial Intelligence Tools: This course emphasizes skill development in the designated content area. While students are encouraged to engage in independent work, the use of artificial intelligence (AI) tools is permitted solely as a reference, similar to how the internet might be used for research or clarification. Direct AI usage to generate content, solve problems, or complete assignments on behalf of the student is not allowed.

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 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
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

Week	Chapter	Topic
1	Chapter 1	*Measurement of Interest*
2	Chapter 1	*Measurement of Interest*
3	Chapter 1	*Measurement of Interest*
4	Chapter 2	*Equations of Value*
5	Chapter 2	*Equations of Value*
6		*Review and EXAM I*
7	Chapter 3	*Basic Annuities*
8	Chapter 3	*Basic Annuities*
9	Chapter 3	*Basic Annuities and More general annuities*
10	Chapter 3	*More general annuities*

11		*Review and EXAM II*
12	Chapter 4	*More general annuities*
13	Chapter 4	*More general annuities*
14	Chapter 4	*Yield Rate and Reinvestment*
15		*Review*