

MATH 326-001: Discrete Analysis for Computer Engineers *Fall 2020 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 Fall 2020: 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: An introduction to mathematical logic, Boolean algebra, and Karnaugh maps. Other topics include functions, equivalence relations and partially ordered sets, counting, graph theory and finite state machines. The emphasis is on computation but proofs will be addressed. Students cannot receive credit for both [MATH 226](#) and [MATH 326](#).

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 326-001	Professor S. Jiang

Office Hours for All Math Instructors: [Fall 2020 Office Hours and Emails](#)

Required Textbook:

Title	zyBook <i>Discrete Math</i>
Notes	<ol style="list-style-type: none"> 1. Sign in or create an account at learn.zybooks.com 2. Enter zyBook code: NJITMATH326JiangFall2020 3. Subscribe. (A subscription is \$58.)

University-wide Withdrawal Date: The last day to withdraw with a **W** is **Monday, November 9, 2020**. It will be strictly enforced.

TRANSITION TO ONLINE INSTRUCTION

Course Structure: This course is conducted entirely online, which means you do not have to be on campus to complete any portion of it. You will participate in the course using NJIT's learning management system called Canvas (<https://canvas.njit.edu>)

Computer Requirements: You will need to have an up-to-date browser, operating system and some additional software on your computer to take this class.

Announcements: Announcements will be posted in CANVAS on a regular basis. They will appear on your CANVAS dashboard when you log in and/or will be sent to you directly through your [preferred method of notification](#) from Canvas. Please make certain to check them regularly, as they will contain any important information about upcoming projects or class concerns.

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, Quizzes, and Class Performance	30%
Exam I	20%
Exam II	20%
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 426.

A	90 - 100	C	69 - 74
B+	85 - 89	D	60 - 68
B	79 - 85	F	0 - 59
C+	75 - 78		

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.

A grade of zero will be assigned for class participation every time you are absent from class. Absences from class will inhibit your ability to fully participate in class discussions and problem solving sessions and, therefore, affect your grade. Tardiness to class is very disruptive to the instructor and students and will not be tolerated. Each student should have contact information of several fellow students to get homework assignments and class notes when absent. You are responsible for everything that happens in class whether you are present or not.

Homework: Homework problems will be assigned in class.

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

Midterm Exam I	Week 5
Midterm Exam II	Week 10
Final Exam Week	December 15 - 21, 2020

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: [Fall 2020 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](#).

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.

Accommodation of Disabilities: Disability Support Services (DSS) 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 Chantonette Lyles, Associate Director of Disability Support Services at [973-596-5417](tel:973-596-5417) or via email at lyles@njit.edu. The office is located in Kupfrian Hall, Room 201. A Letter of Accommodation Eligibility from the Disability Support 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 Disability Support Services (DSS) website at:

- <https://www.njit.edu/studentsuccess/accessibility/>

Important Dates (See: [Fall 2020 Academic Calendar](#), [Registrar](#))

Date	Day	Event
September 1, 2020	T	First Day of Classes
September 5, 2020	S	Saturday Classes Begin
September 7, 2020	M	Labor Day
September 8, 2020	T	Monday Classes Meet
September 8, 2020	T	Last Day to Add/Drop Classes
November 9, 2020	M	Last Day to Withdraw
November 25, 2020	W	Friday Classes Meet
November 26-29, 2020	R - Su	Thanksgiving Recess - University Closed
December 10, 2020	R	Last Day of Classes
December 11 & 14, 2020	F & M	Reading Days

Course Outline

Week	Chapters	Topic
1	1	Logic
2	2, 3	Proofs and Sets
3	3, 4	Sets and Functions
4	5	Boolean Algebra
5		EXAM I
6	6	Relations, Digraphs
7	8	Induction
8	9	Integer Properties
9	9	Number Theory
10		EXAM II
11	10	Counting
12	12	Discrete Probability
13	13	Graphs
14	14	14
15	REVIEW	REVIEW FOR FINAL EXAM

*Updated by Professor R. Plastock - 9/1/2020
Department of Mathematical Sciences Course Syllabus, Fall 2020*