MATH 108-FTF: University Mathematics I-B
Summer 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.

Online Exam Policy Summer 2021: 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.

COURSE INFORMATION

Course Description: Linear functions, equations, inequalities, systems of linear equations, quadratic equations, polynomials, rational expressions, expressions involving radicals, partial fraction decomposition, conic sections. Effective From: Summer 2013

Number of Credits: 4

Prerequisites: None.

Course-Section and Instructors:

Course-Section	Instructor
Math 108-FTF	Professor K. Kniaziewicz

Office Hours for All Math Instructors: Summer 2021 Office Hours and Emails

Required Textbook:

Title	*Precalculus: A Right Triangle Approach*
Author	Ratti and McWaters
Edition	4th
Publisher	Pearson
ISBN #	978-0134851013

Withdrawal Date: Please see the Summer 2021 Academic Calendar for the last day to withdraw based on the summer session you are registered for.

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:

Exam 1	20%
Exam 2	20%
Quizzes	15%
Homework	15%
Final Cumulative Exam	30%

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

A	90 - 100	**C**	70 - 74
B+	85 - 89	**D**	60 - 69
B	80 - 84	**F**	0 - 59
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. Each class is a learning experience that cannot be replicated through simply "getting the notes." To pass this class with a C or better your overall average must be at least 65% AND you need to earn at least 60% on one of the exams.

Virtual Classroom: Classes will be delivered virtually and synchronous during the scheduled meeting. The class will meet online twice a day. The morning session will run from 10:00 am to 12:00 noon while the afternoon session will run from 1:00 pm to 3:00 pm. The instructor will provide the lecture worksheet in advance and will be uploaded in Canvass. It is expected that the students will partake in the discussion through chat, microphone or by sharing screen.

Homework Policy: Each class is a learning experience that cannot be replicated through simply "getting the notes." To pass this class with a C or better your overall average must be at least 65% AND you need to earn at least 60% on one of the exams.

Exams: All assessments will be monitored through the lockdown browser and Respondus monitor. Additional steps will be taken to upload work for partial credit. There would be a quiz every meeting and will be given at

the beginning of each class. There would 2 midterm exams and a final exam throughout the course and will be given at the following dates:

Common Exam I	July 21, 2021
Common Exam II	August 4, 2021
Final Exam	August 16, 2021

Makeup Exam Policy: To properly report your absence from a midterm or final exam, please review and follow the required steps under the DMS Examination Policy found here:

- http://math.njit.edu/students/policies_exam.php

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: Summer 2021 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: 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 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: Summer 2021 Academic Calendar, Registrar)

Date	Day	Event
July 7, 2021	Wednesday	First Day of Classes
July 7, 2021	Wednesday	Last Day to Add/Drop
July 22, 2021	Thursday	Last Day to Withdraw
August 16, 2021	Monday	Last Day of **FTF and Final Exam**

Course Outline

Day	Sections	Topic	Assignment
1		Introduction	
	P1	Real Numbers & Their Properties	P1: ex. 82, 84, 86, 116, 122, 126, 128, 130, 140
	P2	Integer Exponents	P2: ex. 18 20, 24, 28, 32, 36, 38, 42, 48, 50, 58, 66, 72, 76
	1.1	Linear Equations in One Variable	1.1: ex. 9-13, 23-25, 53, 63, 76
2	1.1	Linear Equations in One Variable	1.1: ex. 37-47, 77, 82-83
	1.2	Applications of Linear Equations	1.2: ex. 9-12, 20-30 evens, 49-57 odd
	P6	Rational Exponents and Radicals: Square Roots only	P6: ex 25, 31, 51, 61, 69, 71
3	P4	Polynomials	P3: ex. 15-23, 31, 39, 54, 72
	P3	Factoring	P4: ex. 23, 25, 28, 31, 52, 54, 55, 61, 65, 94-106 even
	1.3	Quadratic Equations: Factoring, Quadratic ormula	1.3: ex. 9-15, 21, 25, 47, 53-63 odd, 91, 95
4	1.3	Quadratic Equations: Completing the Square	1.3: ex. 19, 31, 39, 43, 67-77 odd, 93, 97
	1.4	Complex Numbers	1.4: ex. 11-33 odd, 41-51 odd
5	P5	Rational Expressions	P5: ex. 24, 34, 36, 47, 53, 58, 69, 73, 83
	P6	Rational Exponents and Radicals	P6: ex. 57, 94-97, 105
6	1.5	Solving Other Types of Equations	1.5: ex. 17-20, 27-37 odd, 41-55 odd, 61, 67, 6 9,75, 77
	1.6	Inequalities	1.6: ex.12, 20, 24, 32, 51, 57, 59, 65-77 odd, 9 5-105 odd
7	1.7	Absolute Value Equations and Inequalities	1.7: ex. 11, 13, 23, 25, 33, 53-59 odd, 77
		Catch up & Review	
8		Exam Review	
		EXAM #1	
9	2.1	The Coordinate Plane	2.1: ex. 15-23 odd, 35, 37
	2.2	Graphs	2.2: ex. 25, 35, 37-46, 53, 57, 67, 70, 81, 83, 89

	2.3	Lines	2.3: ex.9, 13, 27, 36-46 even, 79-87 odd, 94
	8.1	Systems of Linear Equations	8.1: ex. 57-71 odd, 95, 99
10	2.4	Functions	2.4: ex. 9, 12, 15, 20, 32, 43, 51-54, 70
	2.5	Properties of Functions	2.5: ex. 9-16, 35-39 odd, 57-67 odd, 108, 109
	2.6	Library of Functions	2.6: ex. 9, 11, 17, 31, 35, 41
11	2.7	Transformations of Functions	2.7: ex. 9-19 odd, 23-34, 41, 63, 69, 75-82, 101, 105
12	2.8	Combining Functions; Composite Functions	2.8: ex. 9-12, 17, 23, 32, 39, 47, 49, 62, 67, 69, 73, 76, 77
	2.9	Inverse Functions	2.9: ex. 15, 17, 25, 29, 33, 55, 57, 67-77 odd
13	3.1	Quadratic Functions	3.1: ex. 9-16, 21, 29, 31, 51, 55
		Catch up & Review	
14		**Exam Review**	
		EXAM #2	
15	3.2	Polynomial Functions	3.2: ex. 9-14, 29-34, 37, 87
	3.3	Dividing Polynomials: Long Division	3.3: ex. 9-19
16	3.3	Dividing Polynomials: Synthetic Division	3.3: ex. 17-29 odd, 35-41 odd
	3.6	Rational Functions	3.6: ex.9-26, 35-51 odd, 53-59, 67, 71
17	3.6	Rational Functions	See above
	10.2	Parabolas	10.2: ex. 17, 21, 23, 27, 29, 31, 41-47 odd
18	10.2	Parabolas	See above
	10.4	Hyperbolas	10.4: ex. 17-27 odd, 43-53 odd, 69, 71, 73
19	3.7	Variation	3.7: ex. 9-13, 29-41 odd
		Catch up & Review	
20		Final Review	
		FINAL EXAM	