

MATH 108-FTF: University Mathematics I-B

Summer 2019 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: 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. Carfora

Office Hours for All Math Instructors: [Summer 2019 Office Hours and Emails](#)

Required Textbook:

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

Withdrawal Date: Please see the [Summer 2019 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 Exam	30%

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

A	90 - 100	C	70 - 74
B+	85 - 89	D	55 - 69
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. Students are expected to attend class. 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.

Homework Policy: Homework is an expectation of the course. All homework for the summer session is listed, by section, below. On line homework will be in My Math Lab sections listed will be in conjunction with your text.

Quiz Policy: Quizzes will be given approximately once a week throughout the semester. They will be based on the lecture, homework and the in-class discussions. There will be 8-12 assessments given throughout the semester.

Exams: There will be two common exams and a final. Please note that the two common exams will be cumulative.

Common Exam I	July 17, 2019
Common Exam II	July 31, 2019
Final Exam	August 14, 2019

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

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.

Further Assistance: For further questions, students should contact their Instructor. All Instructors have regular office hours during the week.

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, Room G11.

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 Fenster Hall Room 260. 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:

- <http://www5.njit.edu/studentsuccess/disability-support-services/>

Important Dates (See: [Summer 2019 Academic Calendar](#), [Registrar](#))

Date	Event
July 1, 2019	First Day of FTF Classes
July 4-5, 2019	University Closed for Independence Day
July 17, 2019	First Common Exam
July 31, 2019	Second Common Exam
August 14, 2019	Final Exam
August 14, 2019	Last Day of FTF Classes

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	P3	Polynomials	P3: ex. 15-23, 31, 39, 54, 72
	P4	Factoring	P4: ex. 23, 25, 28, 31, 52, 54, 55, 61, 65, 94-106 even
	1.3	Quadratic Equations: Factoring, Quadratic Formula	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, 69, 75, 77
	1.6	Inequalities	1.6: ex.12, 20, 24, 32, 51, 57, 59, 65-77 odd, 95-105 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	
24		Final Review	
		FINAL EXAM	

*Updated by Professor K. Carfora - 6/17/2019
Department of Mathematical Sciences Course Syllabus, Summer 2019*