

Instructors Name

Email:

MATH 50:640:115 – PreCalculus College Math

Prerequisite:

50:640:042 or appropriate score on the mathematics placement examination. Credit not given for both this course and 50:640:113. A non-required preparatory course for those students who must take 50:640:121-122.

Overview & Objective:

Algebraic expressions; algebraic equations; functions; graphing; and exponential, logarithmic, and trigonometric functions.

Textbook:

PRECALCULUS *By Buthusiem and Toth* EDITION: 1st 2020 PUBLISHER: Rylan ISBN: 978-1-60797-798-8

Grading:

Your grade will be based off 2 tests and a final exam all of the same weight.

Attendance:

Students attain maximum academic benefit through regular attendance. Therefore, students are expected to attend all class sessions that they are scheduled. Students are advised that attendance at each class is expected and will be recorded. Failure to attend each class could jeopardize the student's successful completion of the course. Absence will not be considered a valid excuse for not being prepared for the next class. If an unexpected emergency preventing attendance arises, the instructor should be notified on the day of the missed class.

Homework:

Students should expect to spend at least two hours working outside of class for every hour spent in class. Specific assignments will be given in class. Homework is to be completed for each section covered to fully understand the material. It will NOT be collected.

CALCULATORS WILL NOT BE PERMITTED!

For additional help, contact the Rutgers-Camden Learning Center (RLC) at <http://learn.camden.rutgers.edu/>

It is the students responsibility to make themselves aware of all University policies and procedures more information on this can be found on the university website www.rutgers.edu

Course Topics

Graphs and Functions

- 2.1 Cartesian Coordinates
- 2.2 Functions
- 2.3 Operations of Functions
- 2.4 Graphs of Functions and Transformations
- 2.5 Inverse Functions

POLYNOMIAL AND RATIONAL FUNCTIONS.

- 3.1 Division of Polynomials
- 3.2 Zeros of Polynomials
- 3.3 Graphs of Polynomial Functions
- 3.4 Rational Functions
- 3.5 Partial Fraction Decomposition
- 3.6 Polynomial and Rational Inequalities

EXPONENTIAL AND LOGARITHMIC FUNCTIONS.

- 4.1 Exponential Functions.
- 4.2 Logarithmic Functions
- 4.3 Exponential and Logarithmic Equations

TRIGONOMETRY

- 5.1 The Unit Circle vs the Real Number Line
- 5.2 The Sine and the Cosine Functions
- 5.3 Additional Identities for Sine and Cosine Functions
- 5.4 Trigonometric Rational Functions
- 5.5 Conditional Trigonometric Equations
- 5.6 The Geometry of Triangles

Conic Sections

- 6.1 Parabolas
- 6.2 Circles and Ellipses
- 6.3 Hyperbolas

Sequences and Series

- 7.1 Sequences
- 7.2 Series
- 7.3 The Principle of Mathematical Induction

Typical Course Pacing and Homework

Lecture	Section	Homework
1	Cartesian Coordinates: Lines, Circles, Parabolas	Going Solo 2.1-2.9
2	Functions.	Going Solo 2.10-2.13
3	Operations with Functions	Going Solo 2.14-2.15
4	Graphs of Functions and Transformations	Going Solo 2.16-2.20
5	Inverse Functions	Going Solo 2.21- 2.24
6	Division of Polynomials	Going Solo 3.1-3.2
7	Zeros of Polynomials	Going Solo 3.3 – 3.8
8	Graphs of Polynomial Functions	Going Solo 3.9 – 3.11
9	Rational Functions	Going Solo 3.12 – 3.14
10	Partial Fraction Decomposition	Going Solo 3.15 – 3.19
11	Polynomial and Rational Inequalities	Going Solo 3.20 - 3.21
12	Review/ Overflow of material	
13	Test 1	
14	Exponential Functions	Going Solo 4.1 – 4.3
15	Logarithmic Functions	Going Solo 4.4 – 4.10
16	Exponential and Logarithmic Equations	Going Solo 4.11 – 4.15
17	The Unit Circle vs the Real Number Line	Going Solo 5.1 – 5.3
18	The Sine and Cosine Functions	Going Solo 5.4 – 5.13
19	Additional Identities for Sine and Cosine Functions	Going Solo 5.14 – 5.15
20	Trigonometric Rational Functions	Going Solo 5.16 – 5.23
21	Conditional Trigonometric Equations	Going Solo 5.24 – 5.28
22	Test 2	
23	The Geometry of Triangles	Going Solo 5.29 – 5.30
24	Parabolas, Circles, and Ellipses	Going Solo 6.1 – 6.5
25	Hyperbolas	Going Solo 6.6 – 6.7
26	Sequences Series	Going Solo 7.1 – 7.11
27	The Principle of Mathematical Induction	Going Solo 7.12 – 7.13
28	Final Exam Review	