



Passaic County Community College
Academic Year: 2023-2024
Standard Syllabus

Department Chair: Janet Delaney
Program Coordinator: Kristina Fleming

Course Code: MA 109

Course Title: Pre-Calculus Mathematics

Department: Mathematics

Semesters Offered: Fall, Spring, Summer

Course Description: This course prepares students for calculus. Topics include the study of functions, and emphasis is placed on the properties of inverse, trigonometric, logarithmic, and exponential functions and analytic geometry.

Prerequisites: MA 108 or TEST PLACEMENT or Permission of the Chairperson

Credits: 4

Lecture Hours: 4

Lab/Studio Hours: 0

Clinical/Fieldwork Hours: 0

Required Textbook/Materials: Pre-Calculus, by Blitzer; **Some sections of the course may use Open Educational Resources*

Additional Time and Supplemental Requirements: Based on a 15 week semester, students are required to spend an additional 8 hours per week on assignments outside of class time.

Course Learning Outcomes: Upon successful completion of this course, students will be able to:

1. Perform operations on functions (add, subtract, multiply, divide, and compose or decompose functions).
2. Find the inverse of a function.
3. Graph functions (polynomial, rational, radical, exponential, logarithmic and trigonometric).
4. Solve problems involving transcendental functions (exponential, logarithmic, and trigonometric).
5. Analyze the behavior of functions.
6. Prove trigonometric identities.
7. Graph conic sections.
8. Use technology to solve problems.
9. Solve application problems.

General Education Outcomes: Upon successful completion of this course, students will be able to:

1. Students will translate quantifiable problems into mathematical terms.
2. Students will use arithmetic, algebraic, geometric or statistical methods to solve problems.

Grading Standard: Final evaluation of class performance will be based on the following:

Participation	5%
Homework	10%
Tests	60%

Final Exam	25%
Total	100%

**Subject to change or could vary slightly by course section*

Course Content:

(Schedule and suggested topics, readings, and assignments subject to change based on instructor and instructional resource)

- Functions and Graphs
- Polynomial and Rational Functions
- Exponential and Logarithmic Functions
- Trigonometric Functions
- Analytic Trigonometry
- The Law of Sines and The Law of Cosines
- Conic Sections

Department Policies:

ACADEMIC HONESTY POLICY – The Mathematics department at Passaic County Community College highly values the honesty and the integrity of each student while helping them to pursue their academic goals. All students must abide by the following academic honesty policy. Students are expected to be honest and ethical at all times in their completion of any coursework. Any dishonesty will not be tolerated in this course. This includes, but is not limited to, cheating, plagiarizing, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person, or obtaining solutions from any website or outside source. Students who are found to be dishonest will receive academic sanctions, such as an "F" grade on the assignment or exam, and the instructor will reserve the right to report the incident to the Academic Affairs Office for possible further disciplinary action.

CALCULATOR POLICY – Graphing calculators without symbolic operations ability are permitted in any calculus sequence course. Therefore, permitted calculators include TI-83, TI-83 Plus, and TI-84. TI-84 Plus and higher (including the TI n-spire) calculators are not permitted. Cell phone calculators are also not permitted. The instructor reserves the right to limit the use of the calculator on certain course assessments.

College Policies:

For Information regarding:

- PCCC's Academic Integrity Code
- Student Conduct Code
- Student Grade Appeal Process

Please refer to the PCCC Student Handbook and PCCC Catalog

Panther Alert: The College will announce delayed openings, closings, and other emergency situations through the Panther Alert System. Students are encouraged to sign up for Panther Alert Notifications by logging into their student accounts through the PCCC website at www.pccc.edu and following Panther Alert System instructions.

Notification for Students with Learnings Disabilities: If you have a disability, and believe you need accommodations in this class, please contact the Office of Accessibility Services at 973-684-6395, or email ods@pccc.edu. You should do so as soon as possible at the start of each semester. If you require testing accommodations, you must remind me (the instructor) one week in advance of each test.