Progressive Mathematics Initiative® (PMI®)
MATH-4401: Pre-Algebra

Course Credit: 1.0 NJCTL Credit

Dates & Times:
This course covers all of the content normally taught in a full-year course. While it will take approximately 120 hours to complete, it is asynchronous, which allows students flexibility in scheduling. The exact number of hours will vary based on each student's study style and preferences.

COURSE DESCRIPTION:
This course is for students to learn the content of PMI Pre-Algebra. The course focuses grades 6-7-8 topics of numeracy, as well as algebraic and graphical representations of linear relationships. All future study of mathematics requires a full understanding of these topics, which include numbers and operations, scientific notation, expressions, solving and graphing equations & inequalities, ratios & proportions, percentages, and probability & statistics.

STUDENT LEARNING OUTCOMES:
Upon completion of the course, the student will be able to:
1. Apply the basic principles of mathematics in the areas of the real number system, expressions, equations, inequalities, ratios, proportions, percents, probability & statistics.
2. Apply basic mathematical tools commonly used in pre-algebra including arithmetic operations, inverse operations, and problem solving.
3. Identify, understand, and communicate the elements, representations, and models of equations to solve word problems.
4. Examine, investigate, and assess the relationships between various mathematical models and their variables.

TEXTS, READINGS, INSTRUCTIONAL RESOURCES:
Required Texts:
- This course uses a free digital text book accessible at:
  https://njctl.org/courses/math/pre-algebra/

COURSE REQUIREMENTS:
Students are expected to meet the following course requirements:
1. Activities: A number of different learning activities will ensure participant engagement and learning in the course. These include:
   - Engage in video module lessons which demonstrate minimized direct instruction followed by frequent formative assessment
   - Completion of formative assessments aligned to learning objectives which include detailed analysis when answered incorrectly.

2. Mastery Exercises: For each module, these multiple-choice question quizzes assess the content knowledge gained in a module.   Participants have the opportunity to retake; random questions are pulled from a larger question bank on each attempt ensuring varied questions.
3. Virtual Labs: In each module, a virtual lab write-up will be submitted. Virtual labs are interactive lab simulations that promote discovery-based student learning through real-world applications and analysis.
4. Module Exam: One is completed at the end of each module. It is a culminating exam consisting of multiple choice and free response questions aligned to the standards and objectives of the module.
5. Final Exam: At the end of the course, a comprehensive exam consisting of Multiple Choice and Free Response questions assesses the content knowledge learned throughout the course.

GRADE DISTRIBUTION AND SCALE:

Grade Distribution:

Module Exams	70%
Final Exam	10%
Labs	10%
Mastery Exercises	10%

Grade Scale:

A	93 – 100
A-	90 – 92
B+	86 – 89
B	83 – 86
B-	80 – 82
C+	77 – 79
C	73 – 76
C-	70 – 72
D	60.0 – 69.9
F	59.9 or below

ACADEMIC INTEGRITY:
Students must assume responsibility for maintaining honesty in all work submitted for credit and in any other work designated by the instructor of the course. Academic dishonesty includes cheating, fabrication, facilitating academic dishonesty, plagiarism, reusing /re-purposing your own work, unauthorized possession of academic materials, and unauthorized collaboration.

DISABILITY SERVICES STATEMENT:
We are committed to providing reasonable accommodations for all persons with disabilities. Any student with a documented disability requesting academic accommodations should contact the Dean of Students, Dr. Rosemary Knab, additional information to coordinate reasonable accommodations for students with documented disabilities (rosemary@njctl.org).

NETIQUETTE:

Respect the diversity of opinions among the instructor and classmates and engage with them in a courteous, respectful, and professional manner. All posts and classroom communication must be conducted in accordance with the student code of conduct. Think before you push the Send button. Did you say just what you meant? How will the person on the other end read the words?

Maintain an environment free of harassment, stalking, threats, abuse, insults or humiliation toward the instructor and classmates. This includes, but is not limited to, demeaning written or oral comments of an ethnic, religious, age, disability, sexist (or sexual orientation), or racist nature; and the unwanted sexual advances or intimidations by email, or on discussion boards and other postings within or connected to the online classroom.

If you have concerns about something that has been said, please let your instructor know.

CLASS SCHEDULE:

Module	Required Readings	• Assignments
1 – Numbers & Operations, Pt. 1	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam
2 - Numbers & Operations, Pt. 2	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam
3 – Numbers & Operations, Pt. 3	• PDFs of presentations within the module. •	• Lab • Mastery Exercise • Module Exam
4 – Numbers & Operations, Pt. 4	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam
5 – Numbers & Operations, Pt. 5	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam
6 – Scientific Notation	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam
7 – Expressions	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam

8 - Equations	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam
9 – Intro. To Inequalities & Graphing	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam
10 – Ratios & Proportions	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam
11 – Percents	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam
12 – Equations with Roots & Radicals	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam
13 – Statistics & Probability	• PDFs of presentations within the module.	• Lab • Mastery Exercise • Module Exam
14 – Reflection & Final Exam	• Review previous modules	• Final Exam