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Course Outline for MATH 107E

PRE-ALGEBRA A CO-REQUISITE SUPPORT

Effective: Fall 2018

I. CATALOG DESCRIPTION:
MATH 107E — PRE-ALGEBRA A CO-REQUISITE SUPPORT — 2.00 units

This credit course is a co-requisite for Pre-Algebra A, the first half of Pre-Algebra. This course is only available through manual enrollment during the semester for students who are taking Pre-Algebra in the Emporium mode and are on track to complete at least the Pre-Algebra A material. This course will support students in achieving Pre-Algebra A learning goals by providing support around mastering the necessary arithmetic, algebraic and geometric concepts that are relevant to their Pre-Algebra A course. This course will provide study strategies that promote understanding and improve performance, more in-depth investigation of core concepts that are difficult for students to master, and learning skills.

2.00 Units Lecture

Corequisite
MATH 107A - Pre-Algebra A

Grading Methods:
Pass/No Pass

Discipline:
- Mathematics

	MIN
Lecture Hours:	36.00
Expected Outside of Class Hours:	72.00
Total Hours:	108.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

A. Develop study skills and life skills that will improve the student's likelihood of succeeding in their academic goals, such as time management, study skills, identifying his/her individual growth mindset, and brain research on learning.
B. Incorporate independent learning skills to master Pre-Algebra A material.
C. Use learning strategies to identify and communicate in their own words the key concepts of Pre-Algebra A.
D. Organize and justify their mathematical thinking on Pre-Algebra A problems.
E. Use effective strategies to read mathematical text for understanding.
F. Apply Pre-Algebra A concepts at a higher level.

V. CONTENT:
A. Students will focus on identifying and communicating what learning objectives were covered in their Pre-Algebra A class.
    1. Students will learn note-taking skills and refer to the notes for understanding.
    2. Students will learn how to synthesize big ideas in the material.
    3. Students will identify examples or problems that relevant to the learning objectives.
B. Practice organizing their thinking and justifying each mathematical steps while simplifying or solving Pre-Algebra problems.
C. Interact with Multimedia Instructional material for understanding.
    1. Make a skeleton outline of material covered in the multimedia instructional material.
    2. Highlight important facts in the material.
D. Review Pre-Algebra A concepts and pratice completing many Pre-Algebra A problems.
E. Successfully solve Pre-Algebra A context problems by learning how to:
    1. Read context problems with understanding
    2. Identify relevant information.
    3. Define variables.
    4. Execute relevant procedures.
    5. Interpret results in the context of the problem.
F. Learn appropriate skills necessary to become more productive, successful and independent learners.
    1. Students will participate in Growth Mindset, Brain Research and learning skill activities.

2. Students will learn about free resources available on campus and on the internet to enhance their learning of mathematics.
3. Students will actively participate in learning skills activities around topics such as time management, note-taking, study habits, etc.

VI. METHODS OF INSTRUCTION:

A. **Classroom Activity** - Students will engage in classroom activities around key mathematical concepts in Pre-Algebra A.
B. **Audio-visual Activity** - Audio-visual activities will only be in small, relevant amounts, with specific skills-building goal in mind and time left for students to practice applying the demonstrated skill described.
C. **Individualized Instruction** - Instructor will provide individualized instruction as often as possible.
D. **Directed Study** - Directed Study will regularly focus students' time on main Pre-Algebra A concepts, creating meaningful notes on what the big ideas are and how they should be applied, citing the multimedia resources as applicable.

VII. TYPICAL ASSIGNMENTS:

A. Binder Activities
   1. Students will be complete essential review materials, with content including math concepts, study skills and applications.
   2. Students will watch video lectures and complete scaffolded lecture note pages that follow the video. The scaffolded notes will teach them how to organize their thinking.
B. Online Activities
   1. Lab Assignments in the online learning environment will include math concepts, study skills and applications. These will be graded for mastery.
   2. Practice assessments in the online learning environment will assess student mastery of concepts.
   3. Online tutorials will be assigned and completed.
C. In Class
   1. Participate in optional workshops with an instructor or tutor on key concepts.
   2. Engage with the online environment, instructor, tutor, and fellow students to learn key concepts.

VIII. EVALUATION:

A. **Methods**

   1. Exams/Tests
   2. Quizzes
   3. Simulation
   4. Group Projects
   5. Class Participation
   6. Class Work
   7. Home Work
   8. Lab Activities

B. **Frequency**

   1. Minimum of 4 chapter assessments (quizzes or tests) and a cumulative assessment test.
   2. Minimum of 4 lab activities.
   3. Homework assignment for every chapter, as needed based on pre-assessment.
   4. Daily classwork and participation.
   5. Simulations and group projects as appropriate to the content.

IX. TYPICAL TEXTS:

1. Martin-Gay, Elayn. *Prealgebra.* 7th ed., Pearson, 2014.
2. Bass, Alan. *Math Study Skills.* 1 ed., Pearson, 2013.
3. *Prealgebra and Introductory Algebra.* 4th ed., Pearson, 2016.
4. Nolting, Paul. *Math Study Skills* . 5th ed., Brooks Cole, 2015.

X. OTHER MATERIALS REQUIRED OF STUDENTS: