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Course Outline for MATH 110C

ELEMENTARY ALGEBRA COREQUISITE SUPPORT

Effective: Fall 2018

I. CATALOG DESCRIPTION:
MATH 110C — ELEMENTARY ALGEBRA COREQUISITE SUPPORT — 2.00 units

This course is a corequisite for Elementary Algebra. The course is designed to provide additional support to students who are currently taking an Elementary Algebra course, such as students who would like formal, built-in support, students who have not placed into Math 110 but hope to accelerate through the sequence of basic skill math courses, or those who are repeating the course. This course will support students in achieving Elementary Algebra learning goals by providing a review of arithmetic, algebraic and geometric concepts that are relevant to their Elementary Algebra course, by providing 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 110 - Elementary Algebra

Grading Methods:
Pass/No Pass

Discipline:
- Mathematics

	MIN
Lecture Hours:	36.00
Total Hours:	36.00

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. Use learning strategies to identify and communicate in their own words the key concepts of Elementary Algebra.
B. Use effective strategies to read mathematical text for understanding.
C. Organize and justify their mathematical thinking on Elementary Algebra problems.
D. Apply Elementary Algebra concepts at a higher level.
E. Use problem solving process to read mathematical problems with understanding, identify relevant information, define variables, execute relevant procedures and interpret results in the context of the problem.
F. Develop study skills and life skills that will improve the student's likelihood of succeeding in their academic goals, such as identifying his/her individual growth mindset, brain research, and learn personal time management, study skills, test taking and math anxiety strategies, etc.

V. CONTENT:
A. Regular classroom and small group discussion will focus on identifying and communicating what learning objectives were covered in their Elementary Algebra 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 Elementary Algebra problems.
C. Read Mathematical text for understanding.
    1. Make a skeleton outline of material covered in the class and textbook.
    2. Highlight important facts in the material or textbook.
D. Review Elementary Algebra concepts and practice completing many Elementary Algebra problems.
E. Successfully solve Elementary Algebra 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 engage in metacognitive discussions around new math concepts.
2. Students will participate in Growth Mindset, Brain Research and learning skills discussions.
3. Students will learn about free resources available on campus and on the internet to enhance their learning of mathematics.
4. Students will actively participate in classroom discussions around topics such as time management, note-taking, study habits, test taking strategies and dealing with math anxiety.

VI. METHODS OF INSTRUCTION:

A. **Audio-visual Activity** - Personalized learning supports and practice on prerequisite material.
B. **Lecture** - Lecture 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. **Discussion** - Instructor should allow regular time to discuss what main Elementary Algebra concepts were covered in their Math 110 course, what the big ideas are, citing their classroom notes and mathematical textbook for evidence.
D. **Individualized Instruction** - Instructor will provide individualized instruction as often as possible.
E. **Demonstration** - Instructor should model examples of what a mathematician should do when approaching the Elementary Algebra content. Students should then practice applying those strategies to additional problems.
F. **Directed Study** - Class will spend time in directed Elementary Algebra content discussions, with students practicing applying concepts individually or in small groups.

VII. TYPICAL ASSIGNMENTS:

A. In Class Discussions
   1. Read from the text each section covered in the Math 110 class that week. Create a skeleton outline of material covered in the textbook. Identify the key concepts covered in these sections. Discuss what these concepts entail and practice applying them to problems.
   2. Learn appropriate skills necessary to become more productive, successful and independent learners by discussing and completing assignments on leading research around growth mindset, learning, study skills, test preparation, math anxiety, etc.
B. In Class Collaborations
   1. Students work collaboratively on applying math concepts from Elementary Algebra. Sample learning assignment: Given the key concepts discussed in Elementary Algebra this week, what are relevant real-world applications? Work collaboratively on problem solving method to set up, solve, communicate the problem solving strategy and solution.

VIII. EVALUATION:

A. **Methods**

   1. Quizzes
   2. Simulation
   3. Group Projects
   4. Class Participation
   5. Class Work

B. **Frequency**

   1. Daily class participation and classwork activities should be completed towards supplementing learning of Elementary Algebra content and/or developing study skills and life skills that will improve the student's likelihood of succeeding in their academic goals.
   2. Weekly assessment quizzes on prerequisite and current content. This can be done inclass or online.
   3. Simulations and group projects as appropriate to the content.

IX. TYPICAL TEXTS:

1. Bass, Alan. *Math Study Skills.* 2 ed., Pearson, 2013.
2. Rockswold, Gary, and Terry Krieger. *Beginning and Intermediate Algebra.* 3rd ed., Pearson, 2016.
3. Marecek, Lynn, and MaryAnne Anthony-Smith. *Strategies For Success: Study Skills for the College Math Student.* 2nd ed., Pearson Publishing, 2014.

X. OTHER MATERIALS REQUIRED OF STUDENTS: