Las Positas College
3000 Campus Hill Drive
Livermore, CA 94551-7650
(925) 424-1000
(925) 443-0742 (Fax)

Course Outline for MATH 55C

CONCURRENT SUPPORT FOR INTERMEDIATE ALGEBRA

Effective: Fall 2019

I. CATALOG DESCRIPTION:
MATH 55C — CONCURRENT SUPPORT FOR INTERMEDIATE ALGEBRA — 1.00 units

This course is concurrent support for Intermediate Algebra. The course is designed to provide additional, formal support to students who are currently taking an Intermediate Algebra. It includes a review of arithmetic, algebraic and geometric concepts that are relevant to their Intermediate Algebra course, study strategies that promote understanding and improve performance, and more in-depth investigation of core concepts that are difficult for students to master. Embedded are learning skills such as growth mindset, brain research, time management, study skills, test taking, math anxiety and more.

1.00 Units Lab

Corequisite
MATH 55 - Intermediate Algebra for BSTEM
or

NMAT 255 - Intermediate Algebra for BSTEM
or

MATH 50 - Intermediate Algebra for SLAM
or

NMAT 250 - Intermediate Algebra for SLAM

Grading Methods:
Pass/No Pass

Discipline:
- Mathematics

	MIN
Lab Hours:	54.00
Total Hours:	54.00

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 Intermediate Algebra.
B. Use effective strategies to read mathematical text for understanding.
C. Organize and justify their mathematical thinking on Intermediate Algebra problems.
D. Apply Intermediate 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 conquering 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 Intermediate 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 are relevant to the learning objectives.
B. Practice organizing their thinking and justifying each mathematical steps while simplifying or solving Intermediate 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 Intermediate Algebra concepts and practice completing many Intermediate Algebra problems.
E. Successfully solve Intermediate 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. **Discussion** - Instructor should allow regular time to discuss what main Intermediate Algebra concepts were covered in their Math 55 course, what the big ideas are, citing their classroom notes and mathematical textbook for evidence.
B. **Audio-visual Activity** - Personalized learning supports and practice on prerequisite material.
C. **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.
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 Intermediate Algebra content. Students should then practice applying those strategies to additional problems.
F. **Directed Study** - Class will spend time in directed Intermediate 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 Intermediate Algebra 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 Intermediate Algebra. Sample learning assignment: Given the key concepts discussed in Intermediate 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:

Methods/Frequency

A. Quizzes
    Frequent quizzes will be given to assess understanding of prerequisite and concurrent concepts.
B. Simulation
    Computer simulation of mathematical concepts will be assigned.
C. Class Participation
    Class will spend time in directed Intermediate Algebra content discussions, with students practicing applying concepts individually or in small groups.
D. Class Work
    Daily learning tasks will be assigned.
E. Home Work
    Homework will be personalized to the student's individual learning needs.

IX. TYPICAL TEXTS:

1. Rockswold, Gary, and Terry Krieger. *Beginning and Intermediate Algebra with Applications & Visualization*. 3rd ed., Pearson, 2016.
2. Marecek, Lynn, and MaryAnne Anthony-Smith. *Strategies For Success: Study Skills for the College Math Student.* 2nd ed., Pearson Publishing, 2014.
3. Nolting, Paul. *Math Study Skills Workbook.* 5 ed., Cengage, 2016.

X. OTHER MATERIALS REQUIRED OF STUDENTS: