



# COURSE OUTLINE OF RECORD

**Number:** MATH C091

**TITLE:** Support for College Algebra

**ORIGINATOR:** Fred Feldon

**EFF TERM:** Spring 2019

**FORMERLY KNOWN AS:**

**DATE OF**

**OUTLINE/REVIEW:** 10-05-2018

**CROSS LISTED COURSE:**

**TOP NO:** 1701.00

**CID:**

**SEMESTER UNITS:** 2.0

**HRS LEC:** 36.0

**HRS LAB:** 0.0

**HRS OTHER:** 0.0

**CONTACT HRS TOTAL:** 36.0

**STUDY/NON-CONTACT HRS RECOMMENDED:** 72.0

**CATALOG DESCRIPTION:**

This course covers the underlying algebra skills and concepts, along with mathematical problem solving and study skills that promote or are needed for success in College Algebra. Concurrent enrollment in specified sections of MATH C115 is required.

**JUSTIFICATION FOR COURSE:**

Required to provide support for underprepared students and to successfully implement AB 705 at Coastline College.

**PREREQUISITES:**

**COREQUISITES:**

- MATH C115: College Algebra

**ADVISORIES:**

**ASSIGNED DISCIPLINES:**

Mathematics

**MATERIAL FEE:** Yes [ ] No [X] Amount: \$0.00

**CREDIT STATUS:** Noncredit [ ] Credit - Degree Applicable [ ] Credit - Not Degree Applicable [X]

**GRADING POLICY:** Pass/No Pass [X] Standard Letter [X] Not Graded [ ] Satisfactory Progress [ ]

**OPEN ENTRY/OPEN EXIT:** Yes [ ] No [X]

**TRANSFER STATUS:** CSU Transferable [ ] UC/CSU Transferable [ ] Not Transferable [X]

**BASIC SKILLS STATUS:** Yes [ ] No [X] **LEVELS BELOW TRANSFER:** Not Applicable

**CALIFORNIA CLASSIFICATION CODES:** Y - Not Applicable

**NON CREDIT COURSE CATEGORY:** Y - Not applicable, Credit Course

**OCCUPATIONAL (SAM) CODE:** E

**REPEATABLE ACCORDING TO STATE GUIDELINES:** No [X] Yes [ ] **NUMBER REPEATS:**

**REQUIRED FOR DEGREE OR CERTIFICATE:** No [X] Yes [ ]

**GE AND TRANSFER REQUIREMENTS MET:**

**COURSE LEVEL STUDENT LEARNING OUTCOME(S) Supported by this course:**

1. Apply the concept of a function; solve and graph quadratic, rational, radical, exponential, and logarithmic functions at a pre-collegiate level.

**COURSE OBJECTIVES:**

1. Simplify arithmetic and algebraic expressions.
2. Solve and graph linear, quadratic, absolute value, radical, rational, logarithmic, and exponential functions.
3. Recognize and graph elementary conics, including circle and parabola.
4. Create a support system including study groups, discussion groups, tutors, success coaches, friends and family members, along with supplemental resources and websites recommended by other students and the instructor.
5. Deal with testing and math anxiety, create a growth mindset, increase number and types of study skills, learn about meta-cognition and other aspects of the affective domain needed for success in college-level math.

**COURSE CONTENT:**

**LECTURE CONTENT:**

- A. Operations, simplification and manipulation
  1. Fractions, decimals and percent
  2. Integers
  3. Polynomials
  4. Factoring
  5. Rational expressions
  6. Complex numbers
  7. Logarithms
  8. Variables with rational exponents
  9. Algebraic expressions involving radicals
- B. Solving Mathematical Statements
  1. Linear equations
  2. Quadratic equations
  3. Factorable polynomial equations
  4. Rational equations
  5. Radical equations
  6. Absolute value equations
  7. Logarithmic equations
  8. Exponential equations
  9. Linear systems of equations
- C. Graphing
  1. Relations
  2. Functions and their inverses
  3. Conic sections
- D. Modeling and applications
  1. Functions
  2. Application and problem-solving strategies and techniques
- E. Affective Domain
  1. Math anxiety
  2. Test anxiety
  3. Growth mindset
  4. Meta-cognition
  5. Study skills
  6. Group work and collaboration skills
  7. Technology skills
    - a. Graphing Calculator
    - b. Computer skills
    - c. Website and Internet search and discovery
    - d. How to communicate mathematically using technology
    - e. Etiquette and proper use of online discussion boards
  8. Support from Coastline College

- a. Student Success Centers
- b. Student Success Coaches
- c. Tutors
- d. Counselors

**LABORATORY CONTENT:**

**METHODS OF INSTRUCTION:**

- A. Lecture:
- B. Online:
- C. Cable:
- D. Hybrid:

**INSTRUCTIONAL TECHNIQUES:**

The instructor shall deliver lectures of course content; assign homework and quizzes; deal with math anxiety by establishing a friendly, student-centered learning environment; relate material in the course to real life and the outside world; involve active learning; and require participation and regular, substantive interaction (RSI), including student-to-student and student-to-instructor interaction through the use of individual, small-group and whole-class discussion; apply and include technology to increase motivation such as graphing calculators, the Internet, and computer software; and include appropriate methods of summative assessment including midterm and final exams.

**COURSE ASSIGNMENTS:**

**Reading Assignments**

Reading assignments are included as part of studying for and completing homework, quizzes, midterm exam(s), final exam, interaction and discussion, and individual and group projects as assigned.

**Out-of-class Assignments**

Out-of-class assignments are included as part of studying for and completing homework, quizzes, midterm exam(s), final exam, interaction and discussion, and individual and group projects as assigned.

**Writing Assignments**

Written and computer-based assignments are included as part of studying for and completing homework, quizzes, midterm exam(s), final exam, interaction and discussion, and individual and group projects as assigned.

**METHODS OF STUDENT EVALUATION:**

- Midterm Exam
- Final Exam
- Short Quizzes
- Written Assignments
- Essay Examinations
- Objective Examinations
- Report
- Projects (ind/group)
- Problem Solving Exercises
- Oral Presentations
- Skills Demonstration

**Demonstration of Critical Thinking:**

Students will be able to choose from a variety of approaches to solve and explain solutions and justify reasoning verbally or in writing and may be included in classroom discussions, quizzes, midterm examination(s), final examination, and projects.

**Required Writing, Problem Solving, Skills Demonstration:**

Students will be able to choose from a variety of approaches to solve and explain solutions and justify reasoning verbally or in writing and may be included in classroom discussions, quizzes, midterm examination(s), final examination, and projects.

**TEXTS, READINGS, AND RESOURCES:**

**TextBooks:**

1. Sullivan. *College Algebra*, 10th ed. Pearson, 2016

**Software:**

1. MyMathLab. Pearson, Latest ed.

**Other:**

1. Coastline Library: [www.coastline.edu/library/](http://www.coastline.edu/library/)

**LIBRARY:**

**Adequate library resources include:** Online Materials

**Comments:**

**Attachments:**

[Attached Files](#)