

## To Math 101 instructors:

(This information is most accurate for Yuba College. Instructors at Woodland Community College should check with Lewis Felver to see if any of the information here differs for you.)

- Department website: <<http://ms.yccd.edu/math>>. The Department website is a good resource for you and your students.
- To find any course outline, go to CurricUNET <<http://yccd.curricunet.com>> or to the Department website. Please look at the course outlines, for they are the principal guides for the courses.
- Please observe the following when you prepare your syllabuses.
  - Include the Course Objectives (CO) and the Course Student Learning Outcomes (SLO).
    - \* CO: go to CurricUNET.
    - \* SLO: go to <<https://ms.yccd.edu/course-slos>> or tracdat: <<https://yccd.tracdat.com>>.
  - Please file a copy of your syllabus with the division office.
- **Calculator** A scientific calculator such as the Texas Instruments TI-30X IIS is permitted.
- **Final Exam**
  - There is a **district-wide common final exam** in the fall and spring. There is no common final exam in the summer or intersession; however, it would be a very good idea to pattern the summer or intersession final exam after the common final exam.
    - \* Students *may* have the use of a calculator during the final exam. The use of a cell phone, iPod, iPad, or other similar device on the final even as a calculator is not permitted.
    - \* If you are going to allow your students to use scratch paper, you should provide the scratch paper and collect it.
    - \* No formula sheet will be provided for the final exam, nor are students permitted to bring in their own formula sheets or cards.
    - \* You should ensure that all of the topics listed are covered and you should hold your students responsible for the material regardless of whether the topics are on the final exam.
  - **Previous common final exams** for you and your students are available at <<http://ms.yccd.edu/downloads.aspx#samplefinals>>. These exams provide an example of the types of problems the students may expect and give an indication of the length of the exam. *Only these Math Department final exams may be distributed to the students.* However, an instructor may write his own review test or sample test.
  - Usual course grading scheme (%):
    - A: 90–100    B: 80–89    C: 70–79    D: 60–69    F: 0–59
    - \* The final exam shall account for at least 25% of the grade.
    - \* No more than 20% of the course grade may be derived from multiple-choice questions (including online homework).
  - Final exams should not be returned to students. Please keep all final exams for at least two years before discarding them.
- **Textbook:** Elayn Martin-Gay, *Beginning & Intermediate Algebra*, 6th edition, Pearson (2017). ISBN-13: 978-0-13-419617-6.

If you need a textbook or other instructor resources, please contact

Wdln: Matt Clark <[mclark@yccd.edu](mailto:mclark@yccd.edu)>;

Yuba: Kristi Page <[kpage@yccd.edu](mailto:kpage@yccd.edu)>.

Textbook sections to be covered:

The numbers 1a, 1b, 1c, and so on, are from the Course Lecture Content listed on the course outline (effective Fall 2016). These are followed by textbook section numbers. These are the barest sections that need to be covered to satisfy the course outline. You may wish to supplement these sections to round out your lessons.

1a: 1.5, 1.6	4: 5.5	9: 9.4
1b: 1.7	5: 2.3, 2.8	10: 3.6, 8.1, 8.2
1c: 1.4, 5.1, 5.5	6a: ?	11: 9.2
1d: 10.1	6b: 3.2	12a: 2.5
1e: 1.4	6c: 3.3	12b: ?
2a: 1.8	6d: 3.4	12c: 2.7, 4.5*
2b: 1.8	6e: 3.5	12d: 2.6, 4.5*
3a: 2.1, 5.2	7a: 4.1	12e: ?
3b: 5.3, 5.4, 5.6	7b: 4.2, 4.3	13: 6.1–6.5
3c: 1.7, 2.5	8: 9.1	

\*In 4.5, some exercises require material from 4.4, which we do not cover.

N.B. Be sure to cover the associative, commutative, distributive, identity, and inverse properties; see the course outline.

If you have any questions, please contact

Wdln: Lewis Felver [lfelver@yccd.edu](mailto:lfelver@yccd.edu) or Yuba: Mukta Sharma [msharma@yccd.edu](mailto:msharma@yccd.edu).

# Yuba Community College District

## Yuba College Course Outline

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### Course Information

**Course Number:** MATH 101  
**Full Course Title:** Elementary Algebra  
**Short Title:** Elem Algebra  
**TOP Code:** -  
**Effective Term:** Fall 2016

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### Course Standards

**Course Type:** Credit - Not Degree Applicable  
**Units:** 4.0  
**Lecture hours:** 72.0  
**Repeatable:** No  
**Grading Method:** Letter Grade or Pass/No Pass

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### Minimum Qualifications for Instructors

- Mathematics (Masters Required)
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### Course Description

To prepare students to take Intermediate Algebra. Topics include: real numbers; algebraic expressions; linear equations and systems of linear equations; linear inequalities in one and two variables (simple, compound, system); scientific notation; graphs and equations of lines in the Cartesian plane; introduction to functions and their graphs; absolute value function and equations; application problems.

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### Conditions of Enrollment

Satisfactory completion of: MATH 111 or (Placement Exam Score)Qualifying score on the mathematics placement test. To allow students who are prepared to take Math 101 not to have to take the prerequisite course.

### Advisories

- **Language - recommended eligibility for English 1A**  
To be able to read and understand the textbook. To be able to read and understand word problems.
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### Content

#### Course Lecture Content

1. Basic operations
  - a. Addition and subtraction
  - b. Multiplication and division

- c. Powers (integer exponents)
  - d. Square roots of real numbers
  - e. The order of operations
  2. Axioms
    - a. Addition and multiplication
    - b. The distributive law
  3. Algebraic expressions
    - a. Add and subtract
    - b. Multiplication and polynomial division
    - c. Evaluating expressions
  4. Introduction to scientific notation
  5. Linear equations and linear inequalities in one variable with rational-number coefficients
  6. Introduction to the Cartesian coordinate system
    - a. Lines
    - b. Graphing
    - c. Intercepts
    - d. Slope
    - e. Equations
  7. Systems of two linear equations
    - a. Solving by graphing
    - b. Solving algebraically
  8. Compound linear inequalities in one variable with rational-number coefficients
  9. Linear inequalities in two variables with rational-number coefficients, and systems of two linear inequalities in two variables with rational-number coefficients
  10. Introduction to functions and function notation: linear and nonlinear functions and their graphs
  11. Equations in one variable that contain absolute value function
  12. Applications that require one equation or a system of two equations, including:
    - a. Formulas
    - b. Perimeter and area
    - c. Distance-rate-time
    - d. Mixture
    - e. Pythagorean theorem
  13. OPTIONAL: Factor polynomials
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## Objectives

1. Perform the basic operations of addition, subtraction, multiplication, and division, powers (integer exponents), and square roots of real numbers using the order of operations.
2. Recognize the correct axiom for addition and multiplication, and the distributive law.
3. Manipulate algebraic expressions: add, subtract, and multiply; polynomial division; evaluate.
4. Translate between standard notation and scientific notation.
5. Solve linear equations and inequalities in one variable with rational-number coefficients. **\*\*Requires Critical Thinking\*\***
6. Graph linear equations in the Cartesian plane, identify slopes and intercepts, find equations, determine if lines are parallel or perpendicular. **\*\*Requires Critical Thinking\*\***
7. Solve systems of two linear equations by graphing and algebraically. **\*\*Requires Critical Thinking\*\***
8. Solve compound linear inequalities in one variable with rational-number coefficients. **\*\*Requires Critical**

## Thinking\*\*

9. Solve linear inequalities in two variables with rational-number coefficients, and systems of two linear inequalities in two variables with rational-number coefficients. **\*\*Requires Critical Thinking\*\***
  10. Evaluate function notation; graph nonlinear functions.
  11. Solve equations in one variable that contain absolute value. **\*\*Requires Critical Thinking\*\***
  12. Solve applications that require one equation or a system of two equations, including perimeter, area, distance-rate-time, mixture, applications of the Pythagorean theorem. **\*\*Requires Critical Thinking\*\***
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## Student Learning Outcomes

1. Derive the equation of a line.
  2. Solve linear inequalities in one variable.
  3. Graph and analyze linear equations.
  4. Translate an application problem into a linear equation or system of linear equations.
  5. Perform arithmetic operations on polynomial expressions.
  6. Apply the properties of integer exponents.
  7. Solve systems of linear equations.
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## Methods of Instruction

- Lecture/Discussion
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## Distance Education

### Delivery Methods

- Online
  - Broadcast Education
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## Assignments

### Reading Assignments

### Writing Assignments

### Other Assignments

A selection of problems from each section of the textbook.

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## Methods of Evaluation

- Exams
  - Homework
  - Oral Tests/Class Performance
  - Quizzes
  - Other
    - Skills test
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## Course Materials

### Textbooks:

1. Martin-Gay, Elayn. *Beginning & Intermediate Algebra – A Custom Edition for the Yuba Community College District*, 1st custom ed ed. Pearson Learning Solutions, 2012, ISBN: 1256811173  
**Equivalent text is acceptable**

### Other:

1. Scientific calculator: Texas Instruments TI-30X IIS or equivalent
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