

To Math 101A/B 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.
- Math 101A will normally always be behind a concurrently-running Math 101 section, so students could drop back to Math 101A from Math 101 anytime; however, it is recommended that student drop backs not be allowed after beginning §2.6 in Math 101A.
- **Calculator** A scientific calculator such as the Texas Instruments TI-30X IIS is permitted.
- **Final Exam**
 - There is a **no** district-wide common final exam for Math 101A/B; however, the final exams for Math 101A/B should reflect the rigor and breadth of the Math 101 common final exam; indeed, it is permissible to use those problems from the current Math 101 common final exam that apply to Math 101A/B on the Math 101A/B final exam, and then to supplement the final exam with additional problems to make it appropriate in length and scope. Contact the current Math 101 common final exam coordinator about this.
 - * 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 is to be provided for the final exam, nor are students to be 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

Wdlnd: Matt Clark <mclark@yccd.edu>;
Yuba: Kristi Page <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.

Math 101A

1a: 1.5, 1.6	3b: 5.3, 5.4, 5.6	6e: 3.5
1b: 1.7	3c: 1.7, 2.5	7: 4.1
1c: 1.4, 5.1, 5.5	4: 2.3	8: 3.6, 8.1, 8.2
1d: 10.1	5: 2.8	9a: 2.5
1e: 1.4	6a: ?	9b: ?
2a: 1.8	6b: 3.2	9c: 2.7, 4.5*
2b: 1.8	6c: 3.3	9d: 2.6, 4.5*
3a: 2.1, 5.2	6d: 3.4	9e: ?

*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.

Math 101B

1: 1.4, 5.1, 5.5	5: 9.1	8b: 2.7, 4.5*
2: 5.5	6: 9.4	8c: 2.6, 4.5*
3: 5.6	7: 9.2	8d: ?
4: 4.2, 4.3	8a: ?	9: 6.1–6.5

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

If you have any questions, please contact

Wdlnd: Lewis Felver lfelver@yccd.edu or Yuba: Mukta Sharma msharma@yccd.edu.

Yuba Community College District

Yuba College Course Outline

Course Information

Course Number: MATH 101A
Full Course Title: Elementary Algebra First Half
Short Title: Elem Alg First Half
TOP Code: -
Effective Term: Fall 2016

Course Standards

Course Type: Credit - Not Degree Applicable
Units: 3.0
Lecture hours: 54.0
Repeatable: No
Grading Method: Letter Grade or Pass/No Pass

Minimum Qualifications for Instructors

- Mathematics (Masters Required)
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Course Description

Together with Math 101B, to prepare students to take Intermediate Algebra. Topics include: real numbers; algebraic expressions; linear equations and systems of linear equations (graphical); linear inequalities in one variable (simple); graphs and equations of lines in the Cartesian plane; introduction to functions and their graphs; application problems. Designed for a variety of students, especially those who are math anxious or require a slower-paced, year-long version of Math 101. Math 101A and Math 101B must both be completed successfully to be equivalent to Math 101 as a prerequisite or to meet degree requirements.

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 101A not 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 (nonnegative 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. Multiply and divide
 - c. Evaluate equations
 4. Linear equations in one variable with rational-number coefficients
 5. 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: solve by graphing
 8. Introduction to functions and function notation: linear and nonlinear functions and their graphs
 9. Applications, including:
 - a. Formulas
 - b. Perimeter and area
 - c. Distance-rate-time
 - d. Mixture
 - e. The Pythagorean theorem
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Objectives

1. Perform the basic operations of addition, subtraction, multiplication, and division, powers (nonnegative 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; evaluate.
 4. Solve linear equations in one variable with rational-number coefficients. ****Requires Critical Thinking****
 5. Solve linear 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.
 8. Evaluate function notation; graph nonlinear functions.
 9. Solve application problems including formulas, 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.
 5. Simplify an expression involving rational numbers using order of operations.
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Methods of Instruction

- **Lecture/Discussion**
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Assignments

Reading Assignments

Writing Assignments

Other Assignments

A selection of problems from each section of the textbook.

Methods of Evaluation

- **Exams**
 - **Homework**
 - **Oral Tests/Class Performance**
 - **Participation**
 - **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-30XIIS or equivalent
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Yuba Community College District

Yuba College Course Outline

Course Information

Course Number: MATH 101B
Full Course Title: Elementary Algebra Second Half
Short Title: Elem Alg Sec Half
TOP Code: -
Effective Term: Fall 2016

Course Standards

Course Type: Credit - Not Degree Applicable
Units: 3.0
Lecture hours: 54.0
Repeatable: No
Grading Method: Letter Grade or Pass/No Pass

Minimum Qualifications for Instructors

- Mathematics (Masters Required)
-

Course Description

Together with Math 101A, to prepare students to take Intermediate Algebra. Topics include: real numbers; algebraic expressions; systems of linear equations (algebraic); linear inequalities in one and two variables (compound, system); scientific notation; absolute value function and equations; application problems. Designed for a variety of students, especially those who are math anxious or require a slower-paced, year-long version of Math 101. Math 101A and 101B, if taken sequentially, can substitute for Math 101 as a prerequisite or to meet degree requirements.

Conditions of Enrollment

Satisfactory completion of: MATH 101A

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 with powers (all integer exponents)
2. Introduction to scientific notation

3. Polynomial division
 4. Systems of two linear equations: solving algebraically
 5. Compound linear inequalities in one variable with rational-number coefficients
 6. Linear inequalities in two variables with rational-number coefficients, and systems of two linear inequalities in two variables with rational-number coefficients
 7. Equations in one variable that contain absolute value function
 8. Applications that require one equation or a system of two equations, including
 - a. Perimeter and area
 - b. Distance-rate-time
 - c. Mixture
 - d. Applications of the Pythagorean theorem
 9. 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. Translate between standard notation and scientific notation.
 3. Perform polynomial division.
 4. Solve systems of two linear equations algebraically. ****Requires Critical Thinking****
 5. Solve linear inequalities in one variable with rational-number coefficients. ****Requires Critical Thinking****
 6. Solve compound linear inequalities in one variable with rational-number coefficients. ****Requires Critical Thinking****
 7. 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****
 8. Solve equations in one variable that contain absolute value function. ****Requires Critical Thinking****
 9. 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. Perform arithmetic operations on polynomial expressions.
 2. Solve linear inequalities in one variable.
 3. Apply the properties of integer exponents.
 4. Solve systems of linear equations.
 5. Translate an application problem into a system of linear equations.
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Methods of Instruction

- **Lecture/Discussion**
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Assignments

Reading Assignments
Writing Assignments
Other Assignments

A selection of problems from each section of the textbook.

Methods of Evaluation

- Exams
 - Homework
 - Oral Tests/Class Performance
 - Participation
 - Quizzes
 - Other
 - Skills test
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Other:

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