To Math 111 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** use is *not 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.
    - It is assumed that students will *not* have the use of a calculator during the final exam.
    - If you are going to allow your students to use scratch paper, you should provide the scratch paper and collect it.
    - 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**: Charles P. McKeague and Kate Duffy Pawlik, *Prealgebra*, XYZ Textbooks, San Luis Obispo (2014). ISBN-13: 978-1-936368-66-2.

  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.

1a: 1.1
1b: 2.1
1c: 4.7
1d: 1.1, 2.1, 2.6, 4.1, 4.7
1e: 2.1, 2.6, 4.1
2a: 1.2, 2.5, 2.8, 4.2
2b: 1.3, 2.5, 2.8, 4.2
2c: 1.4, 2.3, 2.7, 4.3
2d: 1.5, 2.4, 2.7, 4.4
2e: R.7, 10.1, 10.2, 4.7
2f: R.7, 2.9
3a: R.2
3b: R.5
3c: R.5, 3.1
4a: 1.6, 3.1, 10.3, 10.4
4b: 10.3
4c: 3.6, 3.1
5: 3.4, 4.6
6a: ?
6b: ?
6c: 3.1
6d: 8.1, 8.2
6e: 4.7
7: 5.1–5.5, 6.1–6.6
8: 7.1–7.4
9a: 3.5, 5.4
9b: 8.1
9c: 8.2
9d: 4.7

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

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 111
Full Course Title: Prealgebra
Short Title: Prealgebra
TOP Code: -
Effective Term: Fall 2016

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

Minimum Qualifications for Instructors

- Mathematics (Masters Required)

Course Description

Prepares students to take Elementary Algebra. Topics include: real numbers; algebraic expressions; linear equations; basic facts from geometry, including perimeter, area, and the Pythagorean theorem; ratio, proportion, and percent; conversion of units of measure; application problems.

Conditions of Enrollment

Advisories

- **Language - recommended eligibility for English 1A**

Content

Course Lecture Content

1. Introduction to Number Types
    a. Introduction to the integers
    b. Rational numbers
    c. Irrational numbers
    d. Real numbers
    e. Representation of each as fractions, mixed numbers, or decimal numbers.
2. Basic Operations

   a. Addition
   b. Subtraction
   c. Multiplication
   d. Division
   e. Powers (nonnegative integer exponents), and square roots of real numbers
   f. Order of operations
3. Axioms
   a. Addition
   b. Multiplication
   c. Distributive law
4. Algebraic expressions:
   a. Addition and subtraction
   b. Multiplication by a monomial
   c. Evaluating an expression
5. Linear equations in one variable with rational-number coefficients.
6. Basic Geometry
   a. Points and lines
   b. Plane figures
   c. Angles
   d. Perimeter and area of plane figures
   e. Pythagorean theorem
7. Ratio and proportion, and percent
8. Conversion of units of measure
9. Applications requiring a single equation
   a. formulaic
   b. perimeter
   c. area
   d. Pythagorean theorem

Objectives

1. Carry out all arithmetic and algebraic operations without the use of a calculator.
2. Identify a number as an integer, rational number, irrational number, or real number.
3. Represent a real number as a fraction, mixed number, or decimal number; simplify rational numbers (using prime factorization); bound a square root by consecutive integers.
4. 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.
5. Recognize the correct axiom for addition and multiplication, and the distributive law.
6. Manipulate algebraic expressions: add, subtract, and multiply (by a monomial); evaluate.
7. Solve linear equations in one variable with rational-number coefficients. ****Requires Critical Thinking****
8. Find the perimeter or area of plane figures (combination of polygons and portions of circles); use the Pythagorean theorem. ****Requires Critical Thinking****
9. Solve proportion and percent problems. ****Requires Critical Thinking****
10. Convert units of measure. ****Requires Critical Thinking****

11. Solve applications that require one equation, including perimeter, area, applications of the Pythagorean theorem. ****Requires Critical Thinking****

Student Learning Outcomes

1. Perform arithmetic operations on signed real numbers.
2. Convert between fractions, decimals and percents.
3. Identify applications of the field axioms.
4. Solve linear equations in one variable.
5. Solve applied problems involving percents and proportions.
6. Add, subtract, multiply and simplify polynomials.

Methods of Instruction

- **Lecture/Discussion**

Assignments

Reading Assignments
Writing Assignments
Other Assignments

Students will complete a selection of calculation and application problems from each section of the text book.

Methods of Evaluation

- **Exams**
- **Homework**
- **Oral Tests/Class Performance**
- **Quizzes**
- **Research Project**
- **Skills Demonstrations/Performance Exam**

Course Materials

Textbooks:

1. McKeague, Charles P. and Pawlik, Kate Duffy. *Prealgebra,* XYZ Textbooks, 2014, ISBN: 13: 978-1-936368-84-
   Equivalent text is acceptable

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