To Math 52A/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 52A will normally always be behind a concurrently-running Math 52 section, so students could drop back to Math 52A from Math 52 anytime; however, it is recommended that student drop backs not be allowed after beginning §7.5 in Math 52A.
- **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 52A/B; however, the final exams for Math 52A/B should reflect the rigor and breadth of the Math 52 common final exam; indeed, it is permissible to use those problems from the current Math 52 common final exam that apply to Math 52A/B on the Math 52A/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 52 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 Spring 2017). 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 52A

1a: 1.5, 1.6	4b: 7.3	7: 7.5, 10.6
1b: 1.7	4c: 7.2	8a: 2.5, 6.7
1c: 10.2	4d: 7.1	8b: 2.5, 6.7
1d: 1.4	5a: 10.1, 10.3	8c: 7.6
2a: 10.7	5b: 10.4	8d: 8.4
2b: 10.7	5c: 10.4	8e: 2.7, 7.6, 11.3
2c: 10.7	5d: 10.5	8f: 2.6, 2.7, 4.5*
3: 6.1–6.5	6a: 6.6, 6.7	8g: 7.6, 11.3
4a: 7.1	6b: 11.3	8h: 6.7, 10.6

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

Math 52B

1a: 3.6	3c: 11.3	8a: 2.5, 6.7
1b: 12.1	4a: 12.3, 12.5	8b: 2.5, 6.7
1c: 12.1	4b: 12.6	8c: 7.6
1d: 12.1	4c: 12.5	8d: 8.4
1e: 12.2	4d: 12.7	8e: 2.7, 7.6, 11.3
1f: 3.6, 12.1	5: 12.8	8f: 2.6, 2.7, 4.5*
1g: 8.2	6: 10.3	8g: 7.6, 11.3
2: 11.5, 11.6	7a: 13.1	8h: 6.7, 10.6
3a: 11.1	7b: 13.1	9: 9.3, 11.4
3b: 11.2	7c: 13.1	

*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 52A
Full Course Title: Intermediate Algebra First Half
Short Title: Interm Alg 1st Half
TOP Code: 1701.00 - Mathematics, General
Effective Term: Spring 2017

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 52B, this course prepares students to take transfer-level mathematics or statistics courses. Topics include: real and complex numbers; factoring of polynomials; rational and radical expressions and equations; linear and quadratic 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 52. Math 52A and 52B must both be completed successfully to be equivalent to Math 52 as a prerequisite or to meet degree requirements.

Conditions of Enrollment

Satisfactory completion of: MATH 101 or MATH 101B or (Placement Exam Score)Qualifying score on the mathematics placement test. To allow students who are prepared to take Math 52A 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.

Content

Course Lecture Content

1. Basic operations

    a. Addition and subtraction
    b. Multiplication and division
    c. Powers (rational exponents) and nth roots of real numbers
    d. The order of operations.
2. Introduction to complex numbers
    a. Addition and subtraction
    b. Multiplication and division
    c. Powers (nonnegative integer exponents)
3. Factor polynomials
4. Rational expressions
    a. Simplify
    b. Add and subtract
    c. Multiply and divide
    d. Evaluate
5. Radical expressions
    a. Simplify
    b. Add and subtract
    c. Multiply and divide
    d. Rationalize numerator or denominator
6. Nonlinear equations in one variable
    a. Solve by factoring
    b. Solve by changing variables
7. Equations in one variable that contain rational or radical expressions
8. Applications that require one equation or a system of two equations
    a. Perimeter
    b. Area
    c. Proportion
    d. Direct and inverse variation
    e. Distance-rate-time
    f. Mixture
    g. Job-rate
    h. Pythagorean theorem

Objectives

1. Perform basic operations.
2. Factor polynomials.
3. Manipulate rational expressions.
4. Manipulate radical expressions.
5. Translate between rational exponent notation and radical notation.
6. Solve equations in one variable. ****Requires Critical Thinking****
7. Solve applications that require one equation. ****Requires Critical Thinking****

Student Learning Outcomes

1. Factor a polynomial expression.

2. Perform operations on rational expressions.
3. Perform operations on radical expressions.
4. Solve a quadratic equation by factoring.

Methods of Instruction

- **Lecture/Discussion**

Assignments

Reading Assignments
Writing Assignments
Other Assignments

A selection of problems from the end of each section of the textbook.

Methods of Evaluation

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

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

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Yuba Community College District

Yuba College Course Outline

Course Information

Course Number: MATH 52B
Full Course Title: Intermediate Algebra Second Half
Short Title: Interm Alg 2nd Half
TOP Code: 1701.00 - Mathematics, General
Effective Term: Spring 2017

Course Standards

Course Type: Credit - 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 52A, this course prepares students to take transfer-level mathematics or statistics courses. Topics include: functions (general); linear, quadratic, exponential, and logarithm functions and equations; graphs; distance, midpoint, and circles in the Cartesian plane; application problems. Designed for a variety of students, especially those who are math anxious or require a slower-paced, year-long version of Math 52. Math 52A and 52B must both be completed successfully to be equivalent to Math 52 as a prerequisite or to meet degree requirements.

Conditions of Enrollment

Satisfactory completion of: MATH 52A

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.

Content

Course Lecture Content

1. Functions
    a. Function notation

   b. Add and subtract
   c. Multiply and divide
   d. Compose
   e. Invert
   f. Evaluate
   g. Graph
2. Quadratic functions and their graphs
3. Quadratic equations and equations of quadratic type
   a. Solve by completing the square
   b. Solve using the quadratic formula
   c. Solve by changing variables
4. Exponential and logarithm functions
   a. Graphs
   b. Properties
   c. Relation between exponential and logarithm
   d. Change of base of logarithm
5. Equations in one variable that contain exponential or logarithmic function
6. Distance and midpoint between two points in the Cartesian plane
7. Circles
   a. Graph
   b. Equation
   c. Center and radius
8. Applications that require one equation or a system of two equations
   a. Perimeter
   b. Area
   c. Proportion
   d. Direct and inverse variation
   e. Distance-rate-time
   f. Mixture
   g. Job-rate
   h. Pythagorean theorem
9. OPTIONAL: Nonlinear inequalities in one variable.

Objectives

1. Add, subtract, multiply, divide, compose, invert, evaluate, and graph functions.

2. Graph quadratic, exponential, and logarithm functions.

3. Solve quadratic equations and equations of quadratic type by completing the square or the quadratic formula. ****Requires Critical Thinking****

4. Solve equations in one variable that contain exponential or logarithm function. ****Requires Critical Thinking****

5. Find the distance and midpoint between two points in the Cartesian plane.

6. Circles: graph, find an equation, find the center and radius.

7. Solve applications that require one equation or a system of two equations, including perimeter, area, proportion, direct and inverse variation, distance-rate-time, mixture, job-rate, applications of the Pythagorean theorem, exponential growth and decay, compound interest. ****Requires Critical Thinking****

Student Learning Outcomes

1. Demonstrate understanding of logarithmic properties.
2. Analyze and graph a quadratic function.
3. Solve a problem involving exponential equations.
4. Solve a problem involving quadratic equations.

Methods of Instruction

- **Lecture/Discussion**

Assignments

Reading Assignments
Writing Assignments
Other Assignments

A selection of problems from the end of each section of the textbook.

Methods of Evaluation

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

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

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