

**Yuba Community College District  
Yuba College Course Outline Form**

STATIC ID# 100000963  
DATE EFFECTIVE: FALL 2009

COURSE DEPARTMENT/NUMBER MATH 52A TITLE INTERMEDIATE ALGEBRA FIRST HALF

DIVISION ATMESH TOTAL HOURS 54 LECTURE HRS. 54 LAB. HRS. 0 UNITS 3

IF MULTIPLE UNIT OPTION COURSE, ENTER APPLICABLE DATA BELOW:

TOTAL HOURS	LECTURE HRS.	LAB. HRS.	UNITS
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ABBREVIATED TITLE (MAX. OF 20 INCL. SPACES) INTERM ALGEBRA I

NEW COURSE  REVISED COURSE  TECHNICAL REVISION  DISTRIBUTIVE ED.   
(If Distributive Education, complete Distributive Education section *of the outline.*)  
(If revised, indicate sections changed: dept/no  hours/units  description  other )

DEGREE CREDIT  NON-DEGREE  NON-CREDIT

GRADING METHOD: LETTER  PASS/NO PASS  CORE COURSE  ELECTIVE

CROSS LISTED  List dept(s) & #(s): \_\_\_\_\_

CO-REQUISITE  LIST

PRE-REQUISITE  LIST MATH 50 OR EQUIVALENT

Is there a significant change in pre-requisite *or is this a new pre-requisite?* Yes  No   
If yes, validate with a new prerequisite content form. Submit to Office of Instruction.

REPEATABLE NO  R1  R2  R3  IF REPEATABLE, COMPLETE REPEATABLE SECTION BELOW.

SKILL RECOMMENDATIONS: LANGUAGE  MATHEMATICS  OTHER

**Catalog/Class Schedule Description**

Intermediate algebra. Topics include: factoring polynomials, rational expressions, radicals, rational exponents and complex numbers. Designed for a variety of students, including those who have been unsuccessful in Math 52, are math anxious, or desire a slower paced, year long version of Math 52. Intended to provide students with additional exposure to algebraic concepts and additional time to practice them. This course is the first half of Intermediate Algebra. Math 52A and Math 52B must both be taken to be equivalent to Math 52 for courses that require Math 52 as a prerequisite, or to meet a degree requirement.

**Course Content**

**Course Objectives** At the conclusion of this course, the student will be able to:

1. Factor and simplify polynomials.
2. Solve quadratic equations by factoring.
3. Manipulate and simplify rational functions and expressions.
4. Perform basic operations with rational functions.
5. Solve rational equations.
6. Manipulate and simplify radical functions and expressions.
7. Solve radical equations.
8. Understand and perform operations with rational exponents.
9. Understand and perform operations with complex numbers.
10. Solve application problems involving quadratics, rational expressions and radicals.

**Course Topical Outline**

1. Introduction
  - a. Sets of numbers
  - b. Exponents and polynomials
  - c. Rational expressions
  - d. Radical expressions
2. Solving Equations.
  - a. Solve quadratic equations by factoring.
  - b. Solve rational equations
  - c. Solve radical equations (including rational exponents)
3. Applications
  - a. Time and distance
  - b. Proportion.
  - c. Pythagorean Theorem.

**Course Student Learning Outcomes**

**Computation:** use appropriate mathematical concepts and methods to understand, analyze, and communicate issues in quantitative terms.

**Critical Thinking:** analyze data/information in addressing and evaluating problems and issues in making decisions.

SLO Assessment [ ] Rubric [X] Assignment Test [X] Other [ ]

Describe: Problem solving assignments and tests will be used to assess both SLOs.

**Critical Thinking** Copy objectives from Course Objectives that require critical thinking:

Activities that require critical thinking include:

1. Solve quadratic equations by factoring.
2. Manipulate and simplify rational functions and expressions.
3. Solve rational equations.
4. Manipulate and simplify radical functions and expressions.

**General Methods of Instruction** Indicate all appropriate methods of instruction:

Lecture  Discussion  Laboratory/Activity  Distributive Education

Other

**Methods of Assessment** Indicate all methods of assessment:

Quizzes  Essay Tests  Objective Tests  Oral Test

Homework/Assignments  Laboratory Assignments  Class Performance

Performance Exams  Attendance  Research Paper/Final Project

Other

**Assignments for Degree Applicable Courses**

Reading Reading from textbook

Writing Homework

Work Outside Classroom Reading textbook and completion of homework assignments.

**Materials of Instruction**

Textbook(s)

Martin-Gay, Beginning and Intermediate Algebra, Pearson/Prentice Hall, 4<sup>th</sup> edition, or equivalent.

Other Materials or Required Course Supplies

## Distributive Education Section

Online     Telelecture     Telepackage     Enhanced Telepackage

### Course Content and Evaluation

The following will be utilized to replace the traditional face-to-face instruction. For instance, a three-unit lecture class meets students three hours per week. Check the appropriate areas that are comparable.

E-mail <input type="checkbox"/>	Calendar <input type="checkbox"/>	Web-searches <input type="checkbox"/>
Quizzes <input type="checkbox"/>	Bulletin Board <input type="checkbox"/>	Chat <input type="checkbox"/>
Assignments <input type="checkbox"/>	Reading Lectures <input type="checkbox"/>	Watching Lectures <input type="checkbox"/>
Web-browsing <input type="checkbox"/>	Textbook <input type="checkbox"/>	

How will On-Line and ITV techniques be used to accomplish the grading method indicated in the course outline?

### Student-Instructor Contact

What methods will the instructor use to keep in contact with students?

E-mail  Message/Bulletin Board  Telephone  Mail  Other

### How will students with disabilities be accommodated?

Both state and federal law require community colleges to operate all programs and activities in a manner, which is accessible to students with disabilities. Accordingly, as the Yuba Community College District develops its capacity for creation of technology based instructional resources and the delivery of distance education, it must proceed with the needs of all students in mind, including the unique needs of students with disabilities.

Title 5, Code of Regulations, Section 55370 et seq. expressly states that the Requirements of the Americans with Disabilities Act are applicable to Distance Education courses. Accordingly, as the Yuba Community College District develops its capacity for creation of technology base instructional resources and the delivery of distance education; it must proceed with the needs of all students in mind, including unique needs of students with disabilities.

### How will students have access to course materials?

## Repeatable Course Section

(This section is to be completed for courses with an R.)

1. Title V of the California Education Code allows for college courses to be repeated. For a Yuba Community College District course to be repeated it must meet one or more of the criteria listed below. Place a checkmark by the criteria met:
  - The course is progressive in nature and provides an expanded educational experience when repeated.
  - Technology changes are such that students need to repeat the course to maintain employment skills.
  - Continuing education is required for licensure and. *students need to take so many hours of ongoing instruction to maintain their license*
  - Students need* to take the course to improve their skills to a high enough level to succeed at the next course level.
  - The course is a laboratory course that supports or is required by other courses.
  - The course needs to be repeated to allow students to complete the minimum hours required for licensure.
  
2. The number of course *repetitions* allowed is dependent on the course being progressive in nature and providing an expanded educational experience when repeated. Indicate below how many *repetitions* should be allowed:
  - R1 (The class can be repeated once.)
  - R2 (The class can be repeated twice.)
  - R3 (The class can be repeated three times.)

Briefly explain the rationale for the number of *repetitions* requested:

**Articulation:** This course is intended to be (respond to all that apply):

General education at:      CSU       UC       Yuba  (petition filed?)

Transferable to:              CSU       UC       Other

Required in transfer major Yes  No  If yes, in what major?

To what school?

What is the title of that school's equivalent course?

**Approvals:**

[ ] California Education Code (Title V) requirements are met by this course.

**Teaching Discipline(s)**

**Signatures**

Author: [Signature] Date: 1/27/09

Dean: [Signature] Date: 1/27/09

VPI: [Signature] Date: 1/28/09

Curriculum Approval Date: \_\_\_\_\_

Co-chairs: [Signature] Date: 2/23/09

[Signature] Date: 2/24/09

Articulation Officer's Recommendation:  
Not transferable, Associate degree only

Articulation: [Signature] Date: 2/18/09

Board Approval Date: \_\_\_\_\_

For Office Use	
Colleague Entry By	<u>IT 2/17/09</u>
Catalog Entry By	_____
YCCD Equate Code	_____
TOPS CODE	<u>1701-00</u>
SAM CODE	<u>E</u>
Crs. Classification	<u>A</u>
Transfer Code	<u>B</u>
UC Trnsfr Code(s)	<u>NO</u>
Unit Limitation	<u>-</u>
CSU Trnsfr Code(s)	<u>NO</u>
Course CAN Code	<u>-</u>
Course TCSU Code	<u>-</u>

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