

**YUBA COMMUNITY COLLEGE DISTRICT
COURSE OUTLINE**

STATIC ID #

DATE EFFECTIVE: SPRING,
2005

DEPARTMENT MATH **No.** 15A
TITLE: CONCEPTS OF MATHEMATICS

DIVISION ATMESH **TOTAL HOURS** 54 **LECTURE** 54
LAB 0 **UNITS** 3

ABBREVIATED TITLE (MAX. OF 20 INCL. SPACES) CONCEPTS OF MATH

IS COURSE CROSS LISTED: YES NO **IF YES, DEPARTMENT(S) & #(S):**

NEW COURSE **REVISED COURSE** **TECHNICAL REVISION**
DISTRIBUTIVE ED.

(IF NEW COURSE, COMPLETE NEW COURSE ADDENDUM) (IF ON-LINE/ITV, COMPLETE ON-LINE/ITV
ADDENDUM)

(IF REVISED COURSE, ANNOTATE SECTION): CHANGE 15 TO 15A

DEGREE CREDIT **NON-DEGREE** **NON-CREDIT** **GRADING METHOD:**
LETTER **CR/NC**

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

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

B. Transferable to: CSU UC Other

C. Required in transfer major Yes No If yes, in what major? Elementary

Education

To what school? CSU Chico _____;

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

Math – Math 50A

APPROVALS: The following signatures are required:

California Education Code (Title V) Requirements are Met by Course

I have contacted full-time faculty in the discipline and the Instructional Deans at the Lake, Marysville, and Woodland Campuses to inform them of course development/revision.

Signatures (Signed/Printed):

For Office Use

Data Entry By

YCCD Equate Code

TOPS CODE

SAM CODE

Crs. Classification

Transfer Code

UC Trnsfr Code(s)

Unit Limitation _____

CSU Trnsfr Code(s)

Course CAN Code

Author: _____ / _____ Date: _____

Dean: _____ / _____ Date: _____

Articulation Officer's Recommendation:

Articulation: _____ / _____ Date: _____

VPI: _____ / _____ Date: _____

Curriculum Co-chairs:

_____ / _____ Date: _____

_____ / _____ Date: _____

Board Approval Date: _____

Date of Revision/Review: _____

**YUBA COMMUNITY COLLEGE DISTRICT
COURSE OUTLINE**

DEPARTMENT: Mathematics
NUMBER: 15A

COURSE

TITLE: Concepts of Mathematics
CAN NUMBER:

UNITS: 3

TOTAL COURSE HOURS: 54
LAB HOURS: 0

LECTURE HOURS: 54

COREQUISITE(S): None

PREREQUISITE(S): Math 52 with “C” or better or equivalent

PREREQUISITE REVISION: Is there a significant change in the prerequisite? Yes []
No [X]
If yes, validate with a new prerequisite content review summary form. Attach to course outline.

RECOMMENDATION(S):

Language [X]

Mathematics [X]

Other []

I. CATALOG/CLASS SCHEDULE DESCRIPTION

Designed for students who plan to become elementary school teachers. In depth study of mathematical system with emphasis on problem-solving, real numbers, set theory, logic, number theory, and fundamental counting problems. Essays on topics of current interest to the teaching profession, class presentations, and a study of techniques and materials used in today’s elementary school classroom will also be included.

COURSE CONTENT

A. Course Purpose

To explore topics in mathematics of interest to those who plan to become elementary school teachers.

B. Course Objectives

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

Describe several branches of mathematics, and structure and content of mathematics.

Identify important subsets of the real numbers.

Demonstrate conversions and arithmetic in other than base ten.

Describe set terminology and write statements using set language.

Describe elementary probability (fundamental counting techniques).
Employ Polya's methods for problem solving.

C. Course Topical Outline

Sets and Venn diagrams
Systems of numerations
Systems of whole numbers
Structure of the real number system
Mathematical systems
Number theory
Metric theory

If time permits: Probability and counting principals

D. Critical Thinking

Activities that require critical thinking include:
May include: Problem-solving activities, logic, number theory, recognize patterns, reason deductively.

III. GENERAL METHODS OF INSTRUCTION

Please indicate all appropriate methods of instruction

Lecture/discussion
Distributive Education - ITV

IV. METHODS OF ASSESSMENT

Please indicate all methods of assessment

May include: Performance exams, written homework, class performance, attendance.

V. MATERIALS OF INSTRUCTION

Textbook(s)

Mathematics for Elementary School Teachers, 2nd Ed., 2002
Authors: O'Daffer, Charles, Dossey, and Schielack

B. Other Material (if applicable)

VI. ASSIGNMENTS

Degree Applicable Course:

A. Reading Assignments

Reading of textbook, possible reading of other outside material.

B. Writing Assignments

May include: Written homework, or reports.

C. Outside Assignments

May include: Homework assignments, special reports, or projects, class presentations.

VII. APPROPRIATENESS TO COLLEGE MISSION (*Check all that apply*):

<input checked="" type="checkbox"/> Lower Division Degree Credit	<input type="checkbox"/> Community Interest
<input type="checkbox"/> Occupational Preparation	<input type="checkbox"/> Upgrade of Skills
<input checked="" type="checkbox"/> Transfer Course	<input type="checkbox"/> Remedial

Revised & Classified (Show the semester this outline will be implemented.)

**Yuba Community College District
Distributive Education Addendum**

Course Dept/Number: Math 15A **Course Title:** Concepts of Mathematics

Telelecture Online 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.

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

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?

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> E-mail | <input type="checkbox"/> Message/Bulletin Board | <input checked="" type="checkbox"/> Telephone |
| <input type="checkbox"/> Mail | <input type="checkbox"/> 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?

Textbooks are available at the bookstore. Other materials may be mailed.

**Yuba Community College District
New Course Addendum**

Course Dept/Number: _____ **Course Title:**

SITE OF ORIGIN: MARYSVILLE [] WOODLAND [] LAKE [] DISTRICT []

1. For what student population is this course intended?

2. What is the justification for adding this course?

3. Are there existing courses with similar content? Yes [] No []

If yes, list the courses considered and answer the questions below:

- a. Why are they not suitable for the content of this course?

- b. How might they be affected by offering this course?

What new or additional facilities, equipment, staffing or other non-budgeted items will be required to teach the course? How will they be provided?

What new or additional library, media and other district resources will be needed to offer the course?

If this course is started from grant funding, how will it be continued thereafter?

