CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS
COURSE MODIFICATION PROPOSAL

DATE: NOVEMBER 8, 2006
PROGRAM AREA MATHEMATICS

1. Catalog Description of the Course. [Follow accepted catalog format.]
(If Cross-listed please submit a form for each prefix being modified)

OLD
Prefix Math Course# 208 Title Modern Math for Elementary Teachers I– Numbers and Problem Solving Units (3)
3 hours lecture per week
☒ Prerequisites Prerequisite: A passing score on the Entry Level Mathematics Examination or Math 095.
☐ Corequisites
Description Current issues of modern math curriculum including abstract thinking and problem solving approaches to teaching. Content covers systems of numeration, nature of numbers and fundamental operations, relations and functions, properties of integers, rational and real numbers, and mathematical modeling. Problem solving strategies and geometric interpretations are stressed. Designed for students intending to teach in K-8. This course is not open to students who have credit for Calculus.

NEW
Prefix Math Course# 208 Title Modern Mathematics for Elementary Teachers I– Numbers and Problem Solving Units (3)
3 hours lecture per week
☒ Prerequisites Math 101
☐ Corequisites
Description Current issues of modern math curriculum including abstract thinking and problem solving approaches to teaching. Content covers systems of numeration, nature of numbers and fundamental operations, relations and functions, properties of integers, rational and real numbers, and mathematical modeling. Problem solving strategies and geometric interpretations are stressed. Designed for students intending to teach in K-8. This course is not open to students who have credit for Calculus.

Gen Ed Categories
☒ Gen Ed
☐ Lab Fee Required

Graded
☐ CR/NC
☒ Repeatable for up to
A - F
Multiple
Optional (Student’s choice)

Lab Fee Required
☒ Lab Fee Required
☑ Lab Fee Required

3. Course Content in Outline Form if Being Changed. [Be as brief as possible, but use as much space as necessary]

OLD
Modern math curriculum including abstract thinking and problem solving approaches to teaching
Systems of numbers and geometric interpretation of real numbers,
Fundamental operations,
Relations and functions
Properties of integers,
Rational and real numbers,
Mathematical modeling
Mathematical modeling,
Problem solving strategies
Theoretical and practical aspects of mathematics.

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Modern math curriculum including abstract thinking and problem solving approaches to teaching
Systems of numbers and geometric interpretation of real numbers,
Fundamental operations,
Relations and functions
Properties of integers,
Rational and real numbers,
Mathematical modeling
Mathematical modeling,
Problem solving strategies
Theoretical and practical aspects of mathematics.
4. Justification and Learning Objectives for the Course. (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements) [Use as much space as necessary]

OLD
This course is a required course for Liberal Studies students in Teaching Option.

Through this course, students will be able to

• Identify important issues of modern elementary mathematics curriculum
• Demonstrate effective problem solving approaches to teaching
• Apply effective teaching techniques to the instruction of arithmetic, geometry and algebra.
• Discuss content, pedagogy and teaching methods for various grade levels
• Use modern technology and mathematical software in the classroom
• Express ideas related to teaching of secondary school mathematics in oral and written form.

This course is not designed to satisfy the University Writing or Language requirements.

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• Express ideas related to teaching of secondary school mathematics in oral and written form.

This course is not designed to satisfy the University Writing or Language requirements.

5. References. [Provide 3-5 references on which this course is based and/or support it.]


6. Indicate Changes and Justification for Each. [Check all that apply and follow with justification. Be as brief as possible but, use as much space as necessary.]

[ ] Course title
[ ] Prefix/suffix
[ ] Course number
[ ] Units
[ ] Staffing formula and enrollment limits
[ ] Prerequisites/corequisites
[ ] Catalog description
[ ] Course content
[ ] References
[ ] GE
[ ] Other Learning Outcomes

Justification  The new requirements for lower level math courses across the CSU system and CC colleges requires at least algebra 101 level expertise as a prerequisite.

7. If this modification results in a GE-related change indicate GE category affected and Attach a GE Criteria Form: A (English Language, Communication, Critical Thinking)
A-1 Oral Communication
A-2 English Writing
A-3 Critical Thinking

**B (Mathematics, Sciences & Technology)**
- B-1 Physical Sciences
- B-2 Life Sciences – Biology
- B-3 Mathematics – Mathematics and Applications [x]
- B-4 Computers and Information Technology

**C (Fine Arts, Literature, Languages & Cultures)**
- C-1 Art
- C-2 Literature Courses
- C-3a Language
- C-3b Multicultural

**D (Social Perspectives)**

**E (Human Psychological and Physiological Perspectives)**

**UD Interdisciplinary**

8. **New Resources Required. YES ☐ NO ☒**
   If YES, list the resources needed and obtain signatures from the appropriate programs/units on the consultation sheet below.
   
   a. Computer (data processing), audio visual, broadcasting needs, other equipment)
   
   b. Library needs
   
   c. Facility/space needs

9. **Will this course modification alter any degree, credential, certificate, or minor in your program? YES ☐ NO ☒**
   If, YES attach a program modification form for all programs affected.

Ivona Grzegorczył  October 19, 2006
Proposer of Course Modification  Date
Approvals
Program/Course:

_________________________________________________________
Program Chair(s) Date

_________________________________________________________
General Education Chair(s) Date

_________________________________________________________
Curriculum Committee Chair(s) Date

_________________________________________________________
Dean of Faculty Date