

CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

COURSE MODIFICATION PROPOSAL

Courses must be submitted by November 9, 2007, to make the next catalog production

DATE (CHANGE DATE IF REVISED): 11.15.07

PROGRAM AREA(S): EDUCATION--SINGLE SUBJECT TEACHING CREDENTIAL PROGRAM

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

OLD

Prefix EDSS Course# 541 Title Teaching Mathematics in
 Secondary Schools Units (3)
 3 hours lecture per week
 hours blank per week

- Prerequisites: Admission to the Single Subject Credential Program
- Corequisites: EDSS 580 (1-2 units) or EDSS 585

Description (Do not use any symbols): A study of content, methodology, materials and current research in teaching secondary mathematics courses. Focuses on the curricular framework of mathematics as appropriate for high school courses. Emphasizes reflective practice based on California Standards for the Teaching Profession and the use and alignment of curricula to the Academic Content Standards for California Public Schools. Includes an emphasis on teaching in multicultural, multilingual and inclusive classrooms.

- Gen Ed Categories
- Lab Fee Required
- Hegis Code
- Graded CR/NC Repeatable for up to _____ units
- A - F
- Multiple Enrollment in (Student's same semester choice)

- Mission Based Learning Objectives: Interdisciplinary International Multicultural Service Learning
- American Institutions, Title V Section 40404: Government US Constitution US History (Refer to EO 405, for more information at: <http://senate.csuci.edu/comm/curriculum/resources.htm>)
- Service Learning Course

NEW

Prefix EDSS Course# 541 Title Teaching Mathematics in
 High Schools Units (4)
 4 hours lecture per week
 hours blank per week

- Prerequisites: Admission to the Single Subject Credential Program
- Corequisites: EDSS 570, EDSS 580, EDSS 575, or EDSS 585

Description: A study of content, methodology, materials and current research in teaching secondary mathematics courses INCLUDING A FOCUS ON LITERACY. Focuses on the curricular framework of mathematics as appropriate for high school courses. Emphasizes reflective practice based on California TEACHER PERFORMANCE EXPECTATIONS and the use and alignment of curricula to the Academic Content Standards for California Public Schools. EMPHASIZES teaching in multicultural, multilingual and inclusive classrooms.

- Gen Ed Categories
- Lab Fee Required
- Graded CR/NC Repeatable for up to _____ units
- A - F
- Multiple Enrollment in same semester choice)

2. Mode of instruction (Hours per Unit are set for you)

Existing

	Units	Hour Per Unit	Benchmark Enrollment	CS# Units (filled out by Dean)
Lecture	3	1	20	_____
Seminar	_____	1	_____	_____
Laboratory	_____	3	_____	_____
Activity	_____	2	_____	_____
Field Studies	_____	_____	_____	_____
Indep Study	_____	_____	_____	_____
Other blank	_____	_____	_____	_____

Proposed

	Units	Hour Per Unit	Benchmark Enrollment	CS# Units (filled out by Dean)
Lecture	4	1	20	_____
Seminar	_____	1	_____	_____
Laboratory	_____	3	_____	_____
Activity	_____	2	_____	_____
Activity	_____	2	_____	_____
Activity	_____	2	_____	_____
Activity	_____	2	_____	_____

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

OLD

NEW

- History of Mathematics
- Mathematics from a Multicultural Perspective
 - Teaching Mathematics to Diverse Learners
 - Assessment in Mathematics Education
 - Technology in the Secondary Mathematics

Curriculum

- Mathematics as Problem Solving
- Teaching High School Mathematics Content

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- Mathematics from a Multicultural Perspective
 - Teaching Mathematics to Diverse Learners
 - Assessment in Mathematics Education
 - Technology in the Secondary Mathematics

Curriculum

- Mathematics as Problem Solving
- Teaching High School Mathematics Content

*LITERACY IN MATHEMATICS:

- HOW LITERACY DEVELOPS IN THE LEARNER
- ASSESSMENT AS A KEY TOOL, BOTH DIAGNOSTIC AND FORMATIVE

AND FORMATIVE

- READING MATHEMATICS: STRATEGIES FOR INCREASING COMPREHENSION OF TEXT

- PRACTICAL TECHNIQUES FOR TEACHING MATH VOCABULARY

- *TEXTBOOK ANALYSIS AND ADAPTATION

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 is a required course for students seeking a Single Subject Credential in Mathematics.

Through this course, students will be able to

- Identify important issues of modern secondary mathematics curriculum
- Align lessons and lesson plans to the California State Academic Content Standards
- Apply effective teaching techniques to the instruction of high school mathematics content
- Recognize and utilize effective problem-solving strategies in the high school mathematics curriculum and to integrate it into all content area topics
- Discuss pedagogy and demonstrate teaching methods for various student levels and a diverse student population in high schools
- Use modern technology and mathematics software in the classroom
- Develop a variety of means of evaluating student needs and student learning.

NEW

This is a required course for students seeking a Single Subject Credential in Mathematics.

Through this course, students will be able to

- Identify important issues of modern secondary mathematics curriculum
- Align lessons and lesson plans to the California State Academic Content Standards
- Apply effective teaching techniques to the instruction of high school mathematics content
- Recognize and utilize effective problem-solving strategies in the high school mathematics curriculum and to integrate it into all content area topics
- Discuss pedagogy and demonstrate teaching methods for various student levels and a diverse student population in high schools
- Use modern technology and mathematics software in the classroom
- Develop a variety of means of evaluating student needs and student learning.

ADD:

*INTEGRATE EFFECTIVE LITERACY INSTRUCTION TECHNIQUES TO INCREASE ACCESS TO / COMPREHENSION OF READING MATERIALS

*INTEGRATE LITERACY INSTRUCTION TECHNIQUES TO INCREASE ACCESS TO / COMPREHENSION OF MATH VOCABULARY

* DEVELOP ASSIGNMENTS FACILITATE STUDENTS' LEARNING MATH CONTENT WHILE ALSO SUPPORTING THEIR GROWTH AS READERS AND WRITERS

*DEVELOP ASSIGNMENTS FACILITATE STUDENTS' LEARNING MATH CONTENT WHILE ALSO SUPPORTING THEIR GROWTH AS READERS AND WRITERS

*DEVELOP METHODS FOR DIAGNOSING STUDENTS' LITERACY SKILLS IN MATH

*DEVELOP METHODS FOR DIAGNOSING STUDENTS' LITERACY SKILLS IN MATH

*ASSESS THE APPROPRIATENESS OF READING MATERIALS FOR MATH STUDENTS

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

OLD

Reston, VA: NCTM. On reserve in the Science Library.

National Council of Teachers of Mathematics Website: www.nctm.org

Handbook of Research on Mathematics Teaching and Learning, NCTM, D. Grouws (Ed), Macmillan Publishing Co., (1992).

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National Council of Teachers of Mathematics Website: www.nctm.org

Handbook of Research on Mathematics Teaching and Learning, NCTM, D. Grouws (Ed), Macmillan Publishing Co., (1992).

Content area reading and learning : instructional strategies/Eds. Diane Lapp, James Flood, Nancy Farnan. Mahwah, N.J.: Lawrence Erlbaum, 2004.

Content Area Reading: Literacy and Learning Across the Curriculum (8th Edition)

by Richard T. Vacca, Jo Anne L. Vacca. Pearson Allyn & Bacon, 2005.

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 Objectives

Justification: Course title is changed to better reflect the grade/content level specificity of the course. The corequisites have been updated to better reflect the variety of field placements students may take due to either full or part-time status. Units, catalog description, course content, learning outcomes, and references have been changed to reflect the integration of content area literacy into this course. This change is supported by current teacher education research that supports literacy instruction be closely aligned to teaching methods in the content area.

7. **General Education Categories:** All courses with GE categories notations (including deletions) must be processed at the GE website: <http://summit.csuci.edu/geapproval>. Upon completion, the GE Committee will forward your documents to the Curriculum Committee for further processing.

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
- 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.

10. Effective Date (Semester and Year – all modifications submitted prior to November 9th will be effective in the Fall 2008 catalog): Fall 2008

Jeanne M. Grier

Proposer of Course Modification

10/15/2007

Date

Approvals

Program/Course:

Program Chair(s)

Date

General Education Chair(s)

Date

Curriculum Committee Chair(s)

Date

Dean of Faculty

Date