CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

COURSE MODIFICATION PROPOSAL

Courses must be submitted by October 15, 2011, and finalized by the end of the fall semester to make the next catalog (2012-13) production

DATE (CHANGE DATE EACH TIME REVISED): 11/12/2011; REV 12.14.11

PROGRAM AREA(S) : **SCHOOL OF EDUCATION**

Directions: All of sections of this form must be completed for course modifications. Use YELLOWED areas to enter data. All documents are stand alone sources of course information.

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1. Indicate Changes and Justification for Each. *[Mark all change areas that apply and follow with justification. Be as brief as possible but, use as much space as necessary.]*

- X Course title
- Prefix/suffix
- Course number
- X Units
- X Staffing formula and enrollment limits
- X Prerequisites/Corequisites
- X Catalog description
- X Mode of Instruction
- x Course Content
- Course Learning Outcomes
- References
- GE
- Other
- Reactivate Course

Justification: Currently, EDMS 526 is a required 4 unit Mathematics Methods course for Multiple Subject Credential students and offered during the initial semester. Students have repeatedly requested a Math Methods course in each of the two semesters of the program when they teach in different grade level classrooms. The current EDMS 526 course is being divided into two separate courses, each dealing with content and instructional techniques appropriate to different grade levels. EDMS 526 will be the second course in the sequence focusing on 4-6 grades. This structure aligns well with the new state mandated teaching performance assessment which focuses on mathematics instruction. The course is required for MS Credential Program, and meets the California Commission on Teacher Credentialing content standards.

2. Course Information.

[Follow accepted catalog format.] ***(Add additional prefixes i f cross-listed)***

OLD	**NEW**
Prefix EDMS Course# 526	Prefix EDMS Course# 526
Title MODERN METHODS IN Elementary MATHEMATICS TEACHING Units (4)	Title MODERN METHODS IN MATHEMATICS TEACHING TO GRADES 4-6 Units (2)
4 hours lecture per week	2 hours lecture per week
hours blank per week	hours blank per week
X Prerequisites: Admission to the Multiple Subject Program	X Prerequisites: EDMS 525
X Consent of Instructor Required for Enrollment	Consent of Instructor Required for Enrollment
X Corequisites: EDMS 562, EDMS 565 or EDMS 575 or consent of instructor.	X Corequisites: EDMS 562, EDMS 565 or EDMS 575 or consent of instructor.
Catalog Description (Do not use any symbols): Applying techniques and materials to teaching mathematics in self-contained classrooms in K-6 school settings. Special attention is given to mathematical reasoning, problem solving skills, multiple representations and approaches including verbal, symbolic, graphic. Modern methods, including mathematical modeling, use of new technology and modern educational software will be stressed. Designing assessment tools and using assessment data to differentiate activities for English Language Learners and exceptional children are integrated.	**Catalog Description** (Do not use any symbols)**:** Applying techniques and materials to teaching mathematics in self-contained classrooms in Grade 4-6 settings. Special attention is given to mathematical reasoning, problem solving skills, modeling concepts through multiple approaches including verbal, concrete, symbolic, and graphic representations. Designing assessment tools and using assessment data to differentiate activities for English Language Learners and exceptional children. Use of digital technology will be stressed.
General Education Categories:	General Education Categories:
Grading Scheme (Select one below):	Grading Scheme (Select one below):
x A – F	x A – F
Credit/No Credit	Credit/No Credit
Optional (Student's Choice)	Optional (Student's Choice)

Repeatable for up to ____ units
Total Completions ____
Multiple Enrollment in Same Semester Y/N ____
Course Level:
____ Undergraduate
x Post-Baccalaureate
____ Graduate

Repeatable for up to ____ units
Total Completions ____
Multiple Enrollment in Same Semester Y/N ____
Course Level:
____ Undergraduate
x Post-Baccalaureate
____ Graduate

3. Mode of Instruction (Hours per Unit are defaulted) **Hegis Code(s)**_____
(Provided by the Dean)

Existing

	Units	Hours Per Unit	Benchmark Enrollment	Graded
Lecture	4	1	25	x
Seminar		1		
Lab		3		
Activity		2		
Field Studies				
Indep Study				
Other blank				
Online				

Proposed

	Units	Hours Per Unit	Benchmark Enrollment	Graded	CS No. (filled out by Dean)
Lecture	2	1	20	x	
Seminar		1			
Lab		3			
Activity		2			
Field Studies					
Indep Study					
Other blank					
Online					

4. Course Attributes:

____ **General Education Categories**: All courses with GE category notations (including deletions) must be submitted to 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)
UDIGE/INTD Interdisciplinary
Meets University Writing Requirement
Meets University Language Requirement

____ **American Institutions, Title V Section 40404**: ____ Government ____ US Constitution ____ US History
Refer to website, Exec Order 405, for more information: http://senate.csuci.edu/comm/curriculum/resources.htm
____ **Service Learning Course** (Approval from the Center for Community Engagement must be received before you can request this course attribute).

5. Justification and Requirements for the Course. *[Make a brief statement to justify the need for the course]*

OLD **NEW**

This course is a required course in the Multiple Subject Teacher Credential Program. It meets the standards set by the California Commission on Teacher Credentialing.

X Requirement for the Major/Minor
Elective for the Major/Minor
Free Elective

The course is required for MS Credential Program, and meets the content standards set by California Commission on Teacher Credentialing.

X Requirement for the Major/Minor
Elective for the Major/Minor
Free Elective

Submit Program Modification if this course changes your program.

6. Student Learning Outcomes. (List in numerical order. You may wish to visit resource information at the following website: http://senate.csuci.edu/comm/curriculum/resources.htm)

Upon completion of the course, the student will be able to:

OLD

1. Plan and implement a mathematics program meeting the standards outlined in the California Mathematics Framework
2. Use current research finding to inform curriculum planning, design and implementation
3. Design and use appropriate tools to assess student understanding, skills and work
4. Develop standards-based, data driven, learner-centered lessons
5. Create instructional activities that promote universal access to mathematics content
6. Integrate the use of modeling/manipulatives to bridge the stages of conceptual development
7. Employ multiple approaches to teach lessons that develop conceptual understanding and enhance skills
8. Infuse information and communication technology appropriately as a tool in mathematics learning
9. Devise and apply rubrics to assess student work.
10. Plan a teaching unit that successfully meets the requirements for CCTC teaching performance assessment

Upon completion of the course, the student will be able to:

NEW

1. Use current research finding to inform curriculum planning, design and implementation
2. Design and use appropriate tools to assess student understanding, skills and work
3. Plan and implement a mathematics unit to meet the standards outlined in the California Mathematics Framework
4. Develop standards-based, data driven, learner-centered lessons
5. Create differentiated instructional activities that promote access for all students
6. Integrate manipulatives to model mathematics concepts and procedures
7. Employ multiple approaches to teach lessons that develop conceptual understanding and enhance skills
8. Infuse digital technology appropriately as a tool in mathematics learning
9. Plan a teaching unit that successfully meets the requirements for CCTC teaching performance assessment

7. Course Content in Outline Form. (Be as brief as possible, but use as much space as necessary)

OLD

- Elementary and Middle School Mathematics
- Curriculum and Organization
- Balanced Content
- Characteristics of Effective Mathematics Learning Environment
- Traits of Effective Mathematics Teachers
- Learners' Needs and Learning Strategies
- Teaching Diverse Learners
- Planning Strategies
- Learner-Centered Instructional Strategies
- Infusing Information and Communication Technologies
- Assessment and Evaluation Strategies

NEW

- California standards for grades 4-6 mathematics curriculum
- Balanced approach to the mathematics curriculum
- Characteristics of an effective mathematics learning environment
- Developing problem-based learning activities
- Modeling mathematical thinking
- Planning mathematics units and lessons
- Assessing learners' needs
- Differentiating tasks for diverse learners
- Selecting appropriate learner-centered instructional strategies
- Infusing information and communication technologies into mathematics instruction

Does this course content overlap with a course offered in your academic program? Yes **No** x
If YES, what course(s) and provide a justification of the overlap.

Does this course content overlap a course offered in another academic area? Yes **No** x
If YES, what course(s) and provide a justification of the overlap.

Overlapping courses require Chairs' signatures.

8. Cross-listed Courses (Please note each prefix in item No. 1)

A. List cross-listed courses (Signature of Academic Chair(s) of the other academic area(s) is required).
B. List each cross-listed prefix for the course:
C. Program responsible for staffing:

9. References. *[Provide 3-5 references]*

OLD

California Department of Education, (2006). Mathematics Framework for California Public Schools, http://www.cde.ca.gov/cdepress/math.pdf
The National Council of Teachers of Mathematics, (2000). Principles and Standards for School Mathematics http://standards.nctm.org
Performance Assessment for California Teachers, (2007) Handbook for Elementary Mathematics Teaching Event.
Burns, M. (2000). About teaching Mathematics: A K-8 Resource. Saucilito, CA. Math Solutions Publications.
Van de Walle, J. (2007). Elementary and Middle School Mathematics, 5/e. Boston, MA. Allyn and Bacon.

NEW

California Department of Education, (2006). Mathematics Framework for California Public Schools, http://www.cde.ca.gov/cdepress/math.pdf
The National Council of Teachers of Mathematics, (2007). Principles and Standards for School Mathematics http://standards.nctm.org
Burns, M. (2000). About teaching Mathematics: A K-8 Resource. Saucilito, CA. Math Solutions Publications.
Van de Walle, J. (2009). Elementary and Middle School Mathematics, 6/e. Boston, MA. Allyn and Bacon.

10. Tenure Track Faculty qualified to teach this course.
Merilyn Buchanan

11. Requested Effective Date or First Semester offered: Fall 2012

12. New Resource Requested: Yes No x
If YES, list the resources needed.

A. Computer Needs (data processing, audio visual, broadcasting, other equipment, etc.)
B. Library Needs (streaming media, video hosting, databases, exhibit space, etc.)
C. Facility/Space/Transportation Needs:
D. Lab Fee Requested: Yes No (Refer to the Dean's Office for additional processing)
E. Other.

13. Will this course modification alter any degree, credential, certificate, or minor in your program? Yes No
If, YES attach a program update or program modification form for all programs affected.
Priority deadline for New Minors and Programs: October 1, 2011 of preceding year.
Priority deadline for Course Proposals and Modifications: October 15, 2011.
Last day to submit forms to be considered during the current academic year: April 15th.

Merilyn Buchanan 11/12/2011

Proposer(s) of Course Modification — Date
Type in name. Signatures will be collected after Curriculum approval.

Approval Sheet

Course:

If your course has a General Education Component or involves Center affiliation, the Center will also sign off during the approval process.

Multiple Chair fields are available for cross-listed courses.

The CI program review process includes a report from the respective department/program on its progress toward accessibility requirement compliance. By signing below, I acknowledge the importance of incorporating accessibility in course design.

Program Chair		
	Signature	Date
Program Chair		
	Signature	Date
Program Chair		
	Signature	Date
General Education Chair		
	Signature	Date
Center for Intl Affairs Director		
	Signature	Date
Center for Integrative Studies Director		
	Signature	Date
Center for Multicultural Engagement Director		
	Signature	Date
Center for Civic Engagement and Service Learning Director		
	Signature	Date
Curriculum Chair		
	Signature	Date
AVP		
	Signature	Date