

NEW COURSE PROPOSAL

Courses must be submitted by October 15, 2011, and finalized by the end of the fall semester for the next catalog production.

Use YELLOWED areas to enter data.

DATE (*Change if modified and redate file with current date*)

FALL 2012; REV 12.6.11

PROGRAM AREA(S)

EDUCATION: MULTIPLE SUBJECT

1. Course Information. *[Follow accepted catalog format.]*

Prefix(es) (Add additional prefixes if cross-listed) and **Course No.** EDMS 525

Title: MODERN METHODS IN MATHEMATICS TEACHING TO GRADES K-3 **Units:** 3

x **Prerequisites:** Admission to the Multiple Subject Program

x **Corequisites:** EDMS 566 or EDMS 562 or consent of instructor

☐ Consent of Instructor Required for Enrollment

Catalog Description (Do not use any symbols): Applying techniques and materials to teaching mathematics in self-contained classrooms in K-3 school settings. Special attention is given to developing number concepts, modeling mathematics concepts through concrete, verbal, symbolic and graphic representations, and mathematical reasoning. Planning units of study, creating lesson plans, and designing and implementing assessment tools to help differentiate activities for English Language Learners and exceptional children are integrated.

Grading Scheme:

x A-F Grades

☐ Credit/No Credit

☐ Optional (Student Choice)

Repeatability:

☐ Repeatable for a maximum of units

Total Completions Allowed

☐ Multiple Enrollment in Same Semester

Course Level Information:

☐ Undergraduate

x Post-Baccalaureate/Credential

☐ Graduate

Mode of Instruction/Components (*Hours per Unit are defaulted*).

	Units	Hours per Unit	Benchmark Enrollment	Graded Component	CS & HEGIS # (Filled in by the Dean)
Lecture	3	3	20	X	
Seminar					
Laboratory					
Activity					
Field Studies					
Inde□ Study					
Other Blank					

Leave the following hours per week areas blank. The hours per week will be filled out for you.

3 hours **lecture** per week

hours blank per week

Is this course delivered online? Yes _____ No x _____

2. 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).

3. Justification and Requirements for the Course. (Make a brief statement to justify the need for the course)

A. Justification: Currently, EDMS 526 is a required 4 unit Mathematics Methods course for Multiple Subject Credential students 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 course is being divided into two separate courses, each dealing with different grade level content and appropriate instructional techniques. EDMS 525 will be the first course in the sequence and additional content reflects a lesson planning component. This structure aligns well with the new state mandated teaching performance assessment which focuses on mathematics instruction. Course required for MS Credential Program, content meets the standards set by the California Commission on Teacher Credentialing.

B. Degree Requirement: ☒ Requirement for the Major/Minor
☐ Elective for the Major/Minor
☐ Free Elective

Note: Submit Program Modification if this course changes your program.

4. Student Learning Outcomes. (List in numerical order. You may wish to use the following resource in utilizing measurable verbs: <http://senate.csuci.edu/comm/curriculum/resources.htm>)

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

1. Use current research finding to inform curriculum planning, design and implementation
2. Design and implement appropriate assessments and analyse results to determine students' understanding and skills
3. Plan and implement a mathematics lessons meeting the standards outlined in the California Mathematics Framework
4. Create instructional activities that promote universal access to mathematics content
5. Integrate the use of modeling/manipulatives to bridge the stages of conceptual development
6. Employ multiple approaches to teach lessons that develop conceptual understanding and enhance skills

5. Course Content in Outline Form. [Be as brief as possible, but use as much space as necessary]

- California and national standards for K-3 mathematics curriculum
- Stages in young children's development of mathematical ideas
- Modeling mathematical thinking
- Characteristics of an effective mathematics learning environments
- Assessing learners' needs
- Planning mathematics units and lessons
- Universal design for instruction and differentiating tasks for diverse learners
- Selecting appropriate learner-centered instructional strategies
- Infusing technologies into mathematics instruction

Does this course content overlap with a course offered in your academic program? **Yes** ☐ **No** ☒

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** ☒

If YES, what course(s) and provide a justification of the overlap. ☐

Overlapping courses require Chairs' signatures.

6. 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).

List each cross-listed prefix for the course: ☐

B. Program responsible for staffing: **School of Education**

7. References. [Provide 3 - 5 references]

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. Sauciloto, CA. Math Solutions Publications.

Schulman Dacey, L. and Eston, R. (1999). Growing Mathematical Ideas in Kindergarten. Sauciloto, CA. Math Solutions Publications.

Van de Walle, J. (2007). Elementary and Middle School Mathematics, 6/e. Boston, MA. Allyn and Bacon.

8. Tenure Track Faculty Qualified to Teach This Course.

Marilyn Buchchanan

9. Requested Effective Date:

First semester offered: Fall 2012

10. New Resources Requested. **Yes** ☐ **No** ☒

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 (please refer to Dean's Office for additional processing) **Yes** ☐ **No** ☐

E. Other

☐

11. Will this new course 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**, of preceding year.
Last day to submit forms to be considered during the current academic year: **April 15th**.

Merilyn Buchanan

10/6/2011

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

Date

Approval Sheet

Program/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 International Affairs Director		
	Signature	Date
Center for Integrative Studies Director		
	Signature	Date
Center for Multicultural Engagement Director		
	Signature	Date
Center for Civic Engagement Director		
	Signature	Date
Curriculum Chair		
	Signature	Date
AVP		
	Signature	Date