

CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

NEW COURSE PROPOSAL

DATE NOVEMBER 8, 2006
PROGRAM AREA MATH

1. Catalog Description of the Course. *[Follow accepted catalog format.]*

Prefix MATH Course# 399 Title Modern Tools in Mathematics Units (1)

3 hours laboratory per week
hours lecture per week

☐ Prerequisites

☐ Corequisites

Description Modern tools and software based problem solving in mathematics.

☐ Gen Ed
Categories

Graded
☒ CR/NC

☒ Repeatable for up to 4 units

☐ Lab Fee Required

☐ A - F
☐ Optional (Student's choice)

Total Completions Allowed 6
☐ Multiple Enrollment in same semester

2. Mode of Instruction.

	Units	Hours per Unit	Benchmark Enrollment	Graded Component	CS # (filled in by Dean)
Lecture				☐	
Seminar				☐	
Laboratory	1	3	24	☐	
Activity				☐	

3. 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]*

The course will offer problem solving activities, graphing tools experiences, computer laboratory work or modern software instruction for all students interested in or in need of improvement of their mathematical skills.

Through this course, students will be able to

- Improve their skills in mathematical problem solving in various contexts
- Discuss mathematics ideas and their applications
- Apply computers and mathematical software to various problems.
- Explore complex problems in hands-on, collaborative setting

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

4. Is this a General Education Course YES ☐ NO ☒

If Yes, indicate GE category and attach 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 ☐

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

☐
☐
☐
☐

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

The course will offer problem solving activities in a computer laboratory.

Representations and problem solving processes.

Analogical problems

Problem similarity in various contexts

Selecting tools and software

Complex problems

Expertise in problem solving

Does this course overlap a course offered in your academic program? YES ☐ NO ☒

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

Does this course overlap a course offered in another academic area? YES ☐ NO ☒

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

Signature of Academic Chair(s) of the other academic area(s) is required on the signature sheet below.

6. Cross-listed Courses (Please fill out separate form for each PREFIX)

List Cross-listed Courses

Signature of Academic Chair(s) of the other academic area(s) is required on the signature sheet below.

Department responsible for staffing: MATH

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

Problem Solving, Ian S Robertson, S Ian Robertson. Taylor and Francis INC, 2001

8. List Faculty Qualified to Teach This Course.

Math faculty

9. Frequency.

a. Projected semesters to be offered: Fall ☒ Spring ☒ Summer ☐

10. New Resources Required. YES ☐ NO ☒

If YES, list the resources needed and obtain signatures from the appropriate programs/units on the sheet below.

a. Computer (data processing), audio visual, broadcasting needs, other equipment)

Existing computer labs

b. Library needs

c. Facility/space needs

11. Will this new course alter any degree, credential, certificate, or minor in your program? YES ☐ NO ☒

If, YES attach a program modification form for all programs affected.

Ivona Grzegorzczuk
Proposer of Course

October 3,2006
Date

Approval Sheet

Program/Course:

Program Chair(s)	Date
------------------	------

General Education Chair(s)	Date
----------------------------	------

Curriculum Committee Chair(s)	Date
-------------------------------	------

Dean of Faculty	Date
-----------------	------