

04-12

December 6, 2004

**Master of Science in Mathematics, Option in Mathematics Education  
for Secondary School Teachers (code MATHMS04)**

This new option was recommended by the Academic Senate on October 28, 2004 and approved by the President on November 30, 2004.

Option in Mathematics Education for Secondary School Teachers is designed for people holding a California Single Subject teaching credential in mathematics and teaching in middle, junior high, or high schools. This option will give students greater expertise in mathematics and mathematics education (curriculum, teaching, learning, assessment and research). The program includes a blend of courses from pure and applied mathematics as well as mathematics education, and also may include coursework from the College of Education.

**Prerequisites**

1. A bachelor's degree in mathematics or mathematics education, or a bachelor's degree with at least 24 upper division units in mathematics from an accredited college or university.
2. A California Single Subject Credential in mathematics
3. Coursework in mathematics should include MATH 247, 310, 341, 355, 380, and 361A or 364A or equivalent with a grade of "C" or better.

**Advancement to Candidacy**

In addition to University requirements stated elsewhere in this catalog, the student must have completed the prerequisites above and must have satisfied the Graduate Writing Assessment Requirement (GWAR). The Student must file for Advancement to Candidacy after completion of at least 6 units (and recommend filing before completing 9 units) of the Program of Study, with at least a 3.0 grade point average. The Student's Program of Study must be approved by the Mathematics Education Graduate Advisor, Mathematics & Statistics Department Chair, Associate Dean for Graduate Accountability in the College of Natural Sciences and Mathematics and Dean of Graduate Studies.

**Requirements for the Option in Mathematics Education for Secondary School Teachers**

1. A minimum of 30 units of graduate level or approved upper division coursework which includes the following:

- A. A minimum of 9 graduate or approved upper division units of mathematics (those marked by \* in the CSULB Catalog), including at least one 500 level mathematics course. If not previously taken for BS or credential, this course of study must include MATH 410 and 444 as a part of these requirements.
- B. A minimum of 15 graduate units of mathematics education including:
- 1) MTED 511 and 512; and
  - 2) At least 9 units in mathematics education chosen in consultation with the Mathematics Education Graduate Advisor from the following courses: MTED 540, 550, 560, 580, 590, 695
- C. A minimum of 6 units of approved upper division or graduate electives from mathematics, mathematics education or approved College of Education courses, chosen in consultation with the Mathematics Education Graduate Advisor. If the student plans to teach at the Community College level she/he must take at least 18 units of graduate or approved upper division mathematics for parts A and C. If the student intends to do a thesis or project he/she must take EDP 520.
2. Complete one of the following three options:
- A. Pass a comprehensive written examination in mathematics education and in one area of pure or applied mathematics;
  - B. Subject to the approval of the Mathematics Education Committee of the Department of Mathematics and Statistics, write a thesis in mathematics education and defend it orally (MTED 698);
  - C. Pass one comprehensive written examination in mathematics education or in one area of pure and applied mathematics and complete a project in mathematics education (MTED 697), subject to the approval of the Mathematics Education Committee of the Department of Mathematics & Statistics.

#### Mathematics Education Thesis

Students choosing the thesis option must consult with the Mathematics Education Graduate Advisor to select a thesis advisor. A thesis is then written in consultation with the mathematics education faculty advisor who will guide the student in choosing the thesis topic and supervise the process of writing the thesis. After a thesis topic is chosen it must be approved by the Mathematics Education Committee. A thesis committee of three faculty members, including

the thesis advisor is then chosen to approve the final work. During the writing of the thesis, students must enroll in MTED 698.

#### Mathematics Education Project

Students choosing the research project option must seek out a Faculty Advisor in mathematics education. A project is then written in consultation with the mathematics education faculty advisor who will guide the student in choosing a topic and supervise the process of writing the project report. After a project topic is chosen it must be approved by the Mathematics Education Committee. During the writing of the project report, students must enroll in MTED 697.

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**EFFECTIVE: Spring 2005**

Code: MATHMS04

College: 65

Career: GR

IPEDS (Major) ERSS: 17011

IPEDS (Degree) ERSD: 17011