

CALIFORNIA STATE UNIVERSITY, LONG BEACH

Department of Mathematics and Statistics

BACHELOR OF SCIENCE IN MATHEMATICS

OPTION IN APPLIED MATHEMATICS (Code MATHBS02)

SUBOPTION I: Area of Application in Science and Engineering

This suboption prepares students for careers as mathematicians who apply their skills to solve mathematical problems arising in engineering and science and/or for graduate study in Applied Mathematics.

The requirements are listed below. Some of the required or optional courses are taught only once a year. In the requirements list the letter (F) indicates Fall semester only and (S) indicates Spring semester only.

1. Lower Division:

MATH 122, 123, 224, 247; CECS 174; PHYS 151, 152; PHYS 254 *or* E E 211 *or* C E 205; ENGL 101 *or* 317.

2. Upper Division:

MATH 323, 361A, 361B, 364A, 364B(S), 380, 470(F).

A minimum of 9 units from the following courses:

MATH 423(S), 461(S), 463(F), 472(S), 479(S), 485(F), STAT 381, 482(F).

Also a minimum of 9 units must be selected from *one* of the following three groups:

A. PHYS 310(F), 340A(S), 340B(F), 350(S), 410(S), 422(S), 450(F).

B. E E 310, 370, 382, 411, 460 (S), 482.

C. C E 335, 359, 437, 438 (S), 458 (F), MAE 371, 373.

3. A total of 120 units.

4. Fulfill General Education requirements. Note that you may use Math 122 or 123 to satisfy General Education requirement B.2.

5. Attain at least a 2.0 GPA in all courses taken, all courses taken at CSULB, all courses in the major, and all upper division courses in the major taken at CSULB.

6. Pass the Graduate Writing Assessment Requirement (GWAR). You must attempt the Writing Proficiency Examination (WPE) by the end of the semester during which you earn 65 or more units and before filing for a Grad Check. See the *CSULB Catalog* for more information.
7. Have degree objective/major code MATHBS02, with the Science/Engineering subplan specified. (If you wish to change your code, see an advisor. It may be possible for Dr. Merryfield to do this electronically.)
8. File a "Program Planner", which has been signed by your Applied Mathematics advisor. This must be done before filing for a Grad Check. See your advisor to obtain this.
9. File for a Grad Check. This should be done by the preceding **October 15** if graduating at the end of the Spring semester or Summer session, and by the preceding **March 15** if graduating at the end of the Fall semester.

Applied Mathematics Advisor: Dr. Melvin Lax. (Office: FO3-209. Phone: (562) 985-4325.)

CR/NC: No upper division course used to satisfy major requirements, except ENGL 317, and no course in the Department of Mathematics and Statistics may be taken CR/NC.

Checking your status: It is a good idea to check with your Applied Mathematics Advisor each semester before enrolling for the next. Your advisor can review your progress, make suggestions, and help you estimate how long it will take you to finish your degree.

Some prerequisites for the application electives are satisfied by other required courses in this option. For example, students who have had MATH 247 and 364A have covered the necessary mathematics indicated by a MATH 370A prerequisite. If any questions arise concerning prerequisites, see your applied math advisor.

Students wishing a minor in Physics should also take Physics 255 (1 unit). Physics 151, 152, 254, 155, and 9 upper division Physics units will meet the requirements for this minor. For further information, inquire at the Physics and Astronomy Department Office.