MINOR IN MATHEMATICS

Units required for Minor: 20-23

Program Description

In today's highly technological society, the study of Mathematics takes on an increasingly important role. The Sacramento State Mathematics Department designs its courses with the goal of providing students with the mathematical concepts appropriate to the student's field.

All units must be taken in Mathematics or Statistics. A minimum of 8 upper division units is required. At least 6 upper division units must be taken at Sacramento State.

Placement - Mathematics Courses

Students who have not completed four years of high school mathematics consisting of

- Beginning Algebra (one year)
- Geometry (one year)
- Intermediate Algebra-Trigonometry (one year)
- Analytic Geometry-Mathematical Analysis (one year)

may need to complete part of this preparation at the University. The following diagram, which is based upon course prerequisites and major objectives, may be of assistance in selecting the necessary coursework.

Satisfactory completion of the Entry Level Mathematics (ELM) requirement is a prerequisite to enroll ment in any mathematics or statistics course in Area B-4 (Quantitative Reasoning) of General Education. The mathematics and statistics courses listed in Area B-4 are:

Code	Title	Units
MATH 1	Mathematical Reasoning	3
MATH 17	An Introduction to Exploration, Conjecture, and Proof in Mathematics	3
MATH 24	Modern Business Mathematics	3
MATH 26A	Calculus I for the Social and Life Sciences	3
MATH 26B	Calculus II for the Social and Life Sciences	3
MATH 29	Pre-Calculus Mathematics	4
MATH 30	Calculus I	4
MATH 31	Calculus II	4
MATH 35	Introduction to Linear Algebra	3
STAT 1	Introduction to Statistics	3
STAT 50	Introduction to Probability and Statistics	4

Students Planning to take any of the following courses must pass a diagnostic test.

Code	Title	Units
MATH 9		
MATH 11		
MATH 17	An Introduction to Exploration, Conjecture, and Proof in Mathematics	3
MATH 24	Modern Business Mathematics	3
MATH 26A	Calculus I for the Social and Life Sciences	3
MATH 29	Pre-Calculus Mathematics	4
MATH 29A	Pre-Calculus Mathematics A	2
MATH 30	Calculus I	4
MATH 107A	Fundamental Mathematical Concepts	3
STAT 1	Introduction to Statistics	3

A brochure describing the diagnostic tests and containing sample questions is available in the campus bookstore. The following table gives the course and appropriate diagnostic test.

Those students who want to prepare for the ELM may purchase the Entry Level Mathematics workbook at the Hornet Bookstore (see Placement Tests section of this catalog).

All students planning to take MATH 30, Calculus I, must take the Calculus Readiness test prior to the semester of enrollment in MATH 30.

Prerequisite Requirements

- Prerequisites must be completed with grade "C-" or better.
- Grade "C-" or better required in all courses applied to Mathematics major or to the Mathematics or Statistics minors.
- PHYS 11A and PHYS 11C are recommended for all Mathematics majors.

Program Requirements

Select **one** of the **two** following options.

Code	Title	Units
Option 1 (20-21 Units)		
MATH 30	Calculus I	4
MATH 31	Calculus II	4
Select one of the following:		3 - 4
MATH 32	Calculus III	
MATH 35	Introduction to Linear Algebra	
STAT 50	Introduction to Probability and Statistics	
Select 9 units of upper division Mathematics and/or Statistics courses selected with approval of a Mathematics advisor		9
Total Units		**20-21**

Code	Title	Units
Option 2 (23 Units)		
MATH 30	Calculus I	4
MATH 31	Calculus II	4
MATH 32	Calculus III	4
MATH 45	Differential Equations for Science and Engineering	3
MATH 105A	Advanced Mathematics for Science and Engineering I	4
MATH 105B	Advanced Mathematics for Science and Engineering II	4
Total Units		**23**