MATHEMATICS MINOR

Offered at: San Luis Obispo Campus

Students may earn a minor in mathematics by completing a coordinated program of study. The program consists of a core of required courses, followed by three to four advanced courses coordinated with a student's career objectives. Interested students should contact the Mathematics Department for individual advisement.

Program Learning Objectives

1. Understand the nature of mathematical proof and be able to write clear and concise proofs.
2. Develop the ability to read, understand, and use basic definitions in linear algebra.
3. Be able to use standard mathematical techniques to solve elementary problems.
4. Be able to communicate effectively in oral and written form.
5. Gain experience exploring open-ended problems, learn to make conjectures, and gather evidence to support or refute these conjectures.
6. Develop the ability to read and to learn mathematics independently.
7. Learn about applications of mathematics in other fields and gain experience in mathematical modeling.
8. Foster global citizenship by developing critical thinking skills.

Minor Requirements and Curriculum

The minor must be completed prior to, or at the same time as, the requirements for the bachelor's degree. A major and a minor may not be taken in the same degree program, and a minor is not required for a degree. Requirements for the minor include:

- At least half of the units must be from upper-division courses (3000-4000 level).
- At least half of the units must be taken at Cal Poly (in residence).
- No more than one-third of the units will be taken with credit-no credit grading (CR/NC), not counting courses with mandatory CR/NC. Departments may further limit CR/NC grading if desired.
- A minimum 2.0 GPA is required in all units counted for completion of the minor.

Code	Title	Units
REQUIRED COURSES		
MATH 1151	Linear Algebra	3-4
or MATH 2341	Linear Analysis	
Select from the following:		2-4
MATH 1262	Calculus II	
MATH 1263	Bridge Calculus II	
MATH/DATA 1265	Calculus for Data Science II	
MATH 2031	Transition to Advanced Mathematics	3
Approved Electives		
Select from the following:		11
MATH 3051	Combinatorics I	
MATH 3055	Graph Theory	
MATH 3111	Number Theory	
MATH 3152	Advanced Linear Algebra	
MATH 3301	Complex Analysis	
MATH 3351	Differential Equations and Boundary Value Problems	
MATH 3511	Euclidean Geometry	
MATH 3622	Mathematics of Data Science	
MATH 3651	Introduction to Numerical Analysis	
MATH 4052	Combinatorics II	
MATH 4201	Abstract Algebra I	
MATH 4202	Abstract Algebra II	
MATH 4264	Real Analysis I	
MATH 4265	Real Analysis II	
MATH 4342	Nonlinear Dynamical Systems	
MATH 4352	Partial Differential Equations	

MATH 4512	Non-Euclidean Geometry
MATH 4531	Differential Geometry
MATH 4541	Introduction to Topology
MATH 4652	Numerical Differential Equations
MATH 4653	Numerical Optimization
MATH 4911	Game Theory
MATH 4981	Advanced Topics in Mathematics
MATH 4982	Advanced Topics in Applied Mathematics
Total Units	**19**