

Minors in the Department of Mathematics and Statistics

The Department of Mathematics and Statistics offers three minor programs:

1. Mathematics Minor

Twenty units of mathematics are required (CS 242 and PHYS 325 also apply). These must include Math 161 (or its equivalent) and at least 6 units of upper-division mathematics courses, not including MATH 300A, 300B, 395, or 399. Approval should be obtained by the junior year in order to plan properly. Sample minor programs are on the reverse; other combinations are also possible.

2. Minor in Applied Statistics

The Applied Statistics Minor offers students an opportunity to learn more about Statistics in preparation for graduate school and the workplace. The minor is highly recommended for students from many disciplines, such as Biology, Kinesiology, Psychology, Business, Economics and Geography.

Twenty units are required, including 6 upper-division. These must include MATH 165, 265, 381, 367, and 467; and at least 6 units from statistically relevant courses in the department or elsewhere at Sonoma State University chosen in consultation with and approved by an advisor in the Department of Mathematics and Statistics.

3. Minor in Mathematics for Teachers

This minor provides students with the content to teach effectively at the elementary, middle school, and early high school levels. It could also prepare candidates to pass the CSET exams, especially at the Foundational level. Twenty-two units total are required, as follows:

- ☐ MATH 300A (3 units)
- ☐ MATH 103 or MATH 150 (3 units)
- ☐ MATH 142 or MATH 200 or Math 220 (3 units)
- ☐ MATH 107 or MATH 161 (4 units)
- ☐ MATH 250 or MATH 300B (3 units)
- ☐ Two of: MATH 306, 310, 316, 470 (6 units)

Possible Mathematics Minors

Minor I (could be expanded to major)		Minor II (Recommended for Computer Science majors)	
161	Calculus I (4 units)	CS 242	Discrete Structures for CS (4 units)
211	Calculus II (4)	Math 161	Calculus I (4)
220	Introduction to Higher Mathematics (3)	Math 211	Calculus II (4)
241	Differential Eqns with Linear Algebra (4)	Math 222	Elementary Applied Linear Algebra (3)
And any two of the following:		And any two of the following:	
306	Number Theory (3)	Math 306	Number Theory (3)
308	College Geometry (3)	Math 316	Combinatorics and Graph Theory (3)
310	History of Mathematics (3)	Math 430	Linear Systems Theory (3)
320	Modern Algebra (4)	Math 441	Operations Research (3)
322	Linear Algebra (3)	Math 470	Mathematical Modeling (3)
340	Real Analysis (4)		
345	Probability Theory (4)		

Minor III (recommended for Life Sciences majors)		Minor IV (recommended for Physical Science majors)	
Math 161	Calculus I (4 units)	Math 161	Calculus I (4 units)
Math 165	Elementary Statistics (4)	Math 165	Elementary Statistics (4)
Math 211	Calculus II (4)	Math 211	Calculus II (4)
Math 265	Intermediate Statistics (4)	Math 241	Differential Equations with Linear Algebra (4)
Math 367	Statistical Consulting and Communication (2)	Math 261	Multivariable Calculus (4)
Math 467	Statistical Consulting, Communication, and Project Management (2)	And any two of the following:	
Math 470	Mathematical Modeling (3)	Math 331	Differential Equations II (3)
		Math 352	Numerical Analysis (3)
		Math 431	Partial Differential Equations (3)
		Math 470	Mathematical Modeling (3)
		Phys 325	Introduction to Mathematical Physics (3)