**Program Learning Objectives**

1. Demonstrate a broad basic knowledge of the biological sciences.
2. Demonstrate a thorough understanding and competency in a specific discipline within the biological sciences.
3. Communicate scientific ideas effectively in both oral and written formats.
4. Think critically and evaluate, design, conduct, and quantitatively assess innovative research in a biological discipline.
5. Apply acquired skills and knowledge needed for employment or advanced graduate or professional study in discipline related areas.

**Required Courses**

- BIO 501 Molecular & Cellular Biology 4
- BIO 502 Biology of Organisms 4
- BIO 503 Population Biology 4
- BIO 561 Proposal Writing for Biological Research 3
- BIO 590 Seminar in Biology (1, 1, 1) 3
- BIO 591 Trends in Biology (1, 1) 2
- BIO 599 Thesis 9

Select from the following: ¹ 4
- BIO 419 Analytical Methods in Ecology
- STAT 419 Applied Multivariate Statistics
- STAT 513 Applied Experimental Design and Regression Models
- STAT 523 Design and Analysis of Experiments I
- STAT 524 Applied Regression Analysis

**Electives**

Additional units at the 400 or 500 level. ¹,² 12

Total units 45

¹ If a STAT course is chosen, Electives must include 3 units taken within the Biological Sciences Department at Cal Poly in order to meet the program requirement of 32 units.

² Students planning to be Teaching Assistants at Cal Poly must take BIO 574.

All 45 units must be acceptable for graduate credit and in accordance with Graduate Guidelines of the Biological Sciences Department. Coursework must include 32 units taken within the Biological Sciences Department at Cal Poly. For further information, students should communicate with the Chair of the Biological Sciences Department or with the Director of the Graduate and Research Committee.