

**Master of Science in Applied Statistics,
Option in Biostatistics**

(This new state-supported degree option was approved by the CSULB Academic Senate on October 24, 2024, approved by the President on October 28th, 2024, and approved by the CSU Chancellor's Office, November 8, 2024.)

Prerequisites

A bachelor's degree from an accredited college or university.

A grade of 'B' or better in the following or their equivalents:

- MATH 247 - Introduction to Linear Algebra (3 units)
- MATH 380 - Probability and Statistics (3 units)
- STAT 381 - Mathematical Statistics (3 units)

or their equivalents; consult the Graduate Advisor.

Advancement to Candidacy

In addition to university requirements, the student must have completed all prerequisite courses listed above, with no grade less than 'B'. Students should file for Advancement upon completion of at least six units (and no more than nine units) of the Program, with at least a 3.0 GPA. Program of study must be approved by the appropriate Graduate Advisor, and Associate Dean in the College of Natural Sciences and Mathematics or designee.

Requirements

A minimum of 31 units of coursework, including a minimum of 22 units at the 500- or 600- level, subject to the following requirements.

Applied Statistics Core

Take all of the following: Multivariate Analysis (3 units)

STAT 560 - Nonparametric Statistics (3 units) or STAT 580 - Time Series (3 units)

STAT 697 - Seminar in Applied Statistics (1 unit)

Statistics Option Requirements

the following three courses:

STAT 491: Statistical Models in Epidemiology (3 units)

STAT 590 - Survival Analysis (3 units)

STAT 592 - Advanced Methods in Biostatistics (3 units)

Take 6 units from the following courses:

- STAT 471: Introduction to R Programming (3 units) or STAT 475 - Data Analysis with SAS (3 units)
- BIOL 574: Bioinformatics (3 units)
- H SC 500 - Elements of Epidemiological Research or H SC 503 - Principles of Public Health Statistics
- STAT 698 - Thesis or Project (3-6 units)
 - A minimum of 3 units is required in STAT 698.

Culminating Activities

In order to satisfy the culminating activity requirement (thesis, project, or comprehensive examination dependent upon the program), students must earn at least three (3) units and no more than six (6) units related to the completion of the culminating activity

Complete one of the following culminating activities:

- A. **Comprehensive Exams:** Pass two comprehensive written examinations in Statistical Inference (STAT 520) and Experimental Design (STAT 530).
 - Students must meet a minimum of 31 units for the program.
- B. **Thesis:** Subject to the approval of the Statistics Committee in the Department of Mathematics and Statistics, write a thesis in Biostatistics and defend it orally.
 -

Career: Graduate

College: College of Natural Science and Mathematics

Department: Mathematics and Statistics

Delivery: Fully Face-to-Face

STEM Eligible