

BIostatISTICS, Certificate

The Graduate Certificate in Biostatistics (GCiB) is designed to provide graduates with the analytic tools needed for effective practice with biostatistical methods.

Learning Outcomes

1. The GCiB recipient will be able to apply appropriate methods of biostatistical inference, including their implementation in standard statistical software and the communication and proper interpretation of the results.
2. The GCiB recipient will be able to read, understand critically evaluate statistical analysis commonly used in professional articles in public health.

Admissions

Admission to the GCiB program will typically include graduate students or working professionals who have completed at least one undergraduate course in statistics or biostatistics course with an overall GPA of B or better. Students currently enrolled in other graduate degree programs at USC are automatically eligible to pursue the certificate (with permission of their home department for concurrent enrollment).

Degree Requirements (15 Hours)

Nine of the 15 hours required for the Graduate Certificate in Biostatistics are mandatory core courses. The three mandatory courses are designed to introduce each student to the fundamentals of statistical analysis and software to perform analyses. The remaining 6 credit hours will be chosen by each student, after consultation with an advisor from the Biostatistics Division, in specialty areas from the list of approved elective courses (listed below). The selection of these elective courses will enable the student to focus their coursework on their individual needs and interests. No more than 9 credit hours applied to a concurrent degree program may be applied to this certificate program.

Required Core (9 Hours)

Students may request the substitution of required core courses by courses rated as equivalent or more advanced. The request must be accompanied by the course syllabus and specifically approved by the Certificate Administrator and/or the Biostatistics Graduate Director.

Course	Title	Credits
Select one of the following:		3
BIOS 700	Introduction to Biostatistics	
or BIOS 701	Concepts and Methods of Biostatistics	
or PUBH 725	Quantitative Methods for Public Health Practice II	
BIOS 757	Intermediate Biostatistics	3
Select three hours of coursework from the following courses:		3
BIOS 710	Effective Data Management for Public Health	
Or any of the following courses for a total of 3 hours:		
BIOS 709	Basic Software for Public Health	
BIOS 711	Introduction to R Programming	
BIOS 712	Introduction to Stata Software	
BIOS 714	Introduction to MS Access for Public Health	
BIOS 719	Advanced SAS Methods for Public Health	
Total Credit Hours		9

Elective Courses (6 Hours)

Substitutions must be specifically approved by the Certificate Administrator and/or the Biostatistics Graduate Director.

Note: Other courses may be developed in the future based on student interest and availability of faculty experience.

Course	Title	Credits
BIOS 754	Discrete Data Analysis	3
BIOS 755	Introduction to Longitudinal Data Analysis	3
BIOS 760	Biostatistical Methods in Clinical Trials	3
BIOS 761	Survival Analysis	3
BIOS 765	Research Design in the Biomedical Sciences	3
BIOS 780	Introduction to Quantile Regression	3