

Applied Biostatistics

Graduate Certificate in Applied Biostatistics

CERTIFICATE CODE - CG32

The Applied Biostatistics Certificate is designed for those individuals who lack formal training in biostatistics and would like to gain skills needed to understand and apply standard statistical techniques. It is a **fully online program** that is available to practitioners and/or students at WVU and elsewhere.

The primary objectives of the program are to:

- Describe basic concepts of probability and statistical inference
- Demonstrate standard techniques of database management and analysis
- Compare and contrast study designs common to health research
- Recognize the primary sources of bias observed in health research
- Interpret appropriate inferences from data based on strengths and limitations of major epidemiologic study designs as well as the results of descriptive and inferential statistical analyses

Individuals who would be interested in such a Certificate include clinical and translational researchers at varying levels of their career (faculty, fellows, residents, basic scientists) as well as public health practitioners, in the state of West Virginia or beyond. Interested individuals in the program should have a desire to be more self-sufficient with their research, specifically being able to know basic study design principles, analyze their data, and interpret their results.

The entire curriculum is available **online**, thus being accessible to individuals from a variety of backgrounds, locations, and experiences. All course notes, homework, programs, etc. are available online, and the instructor is available in a number of formats (online chat, email, phone) to accommodate distance-learning students.

Applied Biostatistics Certificate Program students will typically take one or two classes per semester. Completion of the program will typically take one to two years.

Code	Title	Hours
BIOS 601	Applied Biostatistics 1	4
BIOS 603	Applied Biostatistics 2	3
BIOS 604	Applied Biostatistics 3	3
BIOS 605	Applied Biostatistics Capstone	2
EPID 601	Public Health Epidemiology	3
Total Hours		15

Certificate Learning Outcomes

APPLIED BIOSTATISTICS

Upon completion of the certificate students should be able to:

- Describe basic concepts of probability and statistical inference
- Demonstrate standard techniques of database management and analysis
- Compare and contrast study designs common to health research
- Recognize the primary sources of bias observed in health research
- Interpret appropriate inferences from data based on strengths and limitations of major epidemiologic study designs as well as the results of descriptive and inferential statistical analyses