A bachelor's degree is sufficient for entering the field of biostatistics as an assistant. However, most biostatisticians have M.S. or Ph.D. degrees in biostatistics, statistics, or applied mathematics.

Biostatisticians design research studies and analyze data related to human health, animals, or plants. The healthcare, biomedical, and pharmaceutical fields employ biostatisticians who are responsible for analyzing genetic data, disease occurrence, and medical imaging data. These biostatisticians develop clinical trials to assess drug treatments. Other academic and government biostatisticians analyze data of populations exposed to environmental chemicals and conditions to understand their risks and effects.

EDUCATION

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WHEN MATH IS USED

Biostatisticians design studies, analyze data, formulate scientific questions, determine sampling techniques, coordinate data collection, and carry out statistical analyses. Some biostatisticians help develop statistical techniques. Current areas of research include survival analysis, longitudinal data analysis, methods for analyzing data from epidemiological studies, and high-speed computing.

MATH REQUIRED

- Algebra I and II
- Trigonometry
- Calculus I and II
- Applied Data Analysis
- Survey and Research Methods
- Mathematical Statistics
- Biostatistics

POTENTIAL EMPLOYERS

Biostatisticians may be hired by a number of different employers, such as healthcare institutions, universities, and government. The US Department of Health and Human Services employs biostatisticians for research in epidemiology and nutrition. Many areas of science, including genomics, ecology, and biology use biostatisticians' skills as well. Some biostatisticians work in private companies' research and development groups.

FACTS

Biostatisticians research topics that step from the latest and most relevant findings in science. For example, a biostatistician may research the association between a psychotropic drug and weight gain or the relationship between heart disease and smoking.

CITATIONS

http://www.amstat.org/careers/biostatistics.cfm
http://en.wikipedia.org/wiki/Biostatistics
http://www1.salary.com/Biostatistician-I-Salary.html