



## Department of Biostatistics

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## DrPH in Biostatistics

This concentration is designed for health professionals who would like to become leaders in public health, especially in biostatistics and related areas. The Department of Biostatistics coordinates the concentration. Graduates will be able to develop their careers in academia, public health institutions, or healthcare facilities. The graduate of the concentration will understand public health policies and practices, will identify key elements of quantitative nature for decision-making, and will be able to plan and evaluate health systems and public health programs by using biostatistical methodology. The student will also have the opportunity to learn about community health measurements, as well as the design and management of health data systems. The concentration provides the expertise and experience to plan, develop, and evaluate public health programs. The student will also gain biostatistical knowledge and skills to be able to plan and conduct applied biostatistical research as an independent researcher or member of research teams in public health and other biomedical sciences that use experimental and observational techniques. A doctoral dissertation for the concentration is required, providing the opportunity to apply the knowledge gained during coursework and other academic activities. The dissertation is expected to analyze and propose solutions to a problem with implications for public health practice, often by translating and applying new theoretical and technical advances to current problems in public health. The graduate of this program can undertake professional, managerial or leadership position in governmental or private institutions such as public health departments, academic settings such as schools of public health, epidemiologic research institutions, hospitals and other medical facilities, health care, and pharmaceutical companies. By the conclusion of the Dr.P.H. program, a student in the biostatistics concentration will be able to:

1. Conduct biostatistical research as applied to public health issues.
2. Assist in the planning, development and evaluation of health systems and programs using biostatistical procedures.
3. Assist in the planning, development and evaluation of public health surveillance systems.
4. Analyze and solve a public health issue by applying statistical methodology.
5. Communicate findings of the analysis and solution of a problem of public health importance in professional journals.
6. Conduct experimental research in public health such as community trials and clinical trials in collaboration with other health professionals.
7. Plan and conduct independent research focusing on the analysis and solution of a problem in public health practice, through the completion of a dissertation.

### DrPH Prerequisites (30 SCH)

BIOS	5210	Biostatistics for Public Health I	3 SCH
BIOS	5215	Biostatistics for Public Health II	3 SCH
BIOS	5700	Mathematical Statistics*	3 SCH
BIOS	5730	Regression Analysis*	3 SCH

BIOS	5735	Analysis of Variance*	3 SCH
BIOS	5740	Introduction to Statistical Packages*	3 SCH
ENVR	5300	Environmental Health	3 SCH
EPID	5100	Principles of Epidemiology	3 SCH
HMAP	5210	Introduction to Health Management and Policy	3 SCH
SCBS	5110	Behavioral and Social Aspects of Public Health	3 SCH

\* Depending upon previous course work, these courses may be waived.

## Biostatistics DrPH Curriculum (65 SCH)

### CORE COURSES: 22 SCH

BIOS	6100	Applied Statistical Methods for Data Analysis	3 SCH
ENVR	6100	Environmental Health Determinants	3 SCH
EPID	6110	Intermediate Epidemiology for Non-Majors	3 SCH
HMAP	6100	Health Care Systems	3 SCH
SCBS	6100	Social & Behavioral Theories and Health Applications	3 SCH
HMAP	6140	Ethical Issues in Public Health	2 SCH
HMAP	6145	Leadership for Public Health	2 SCH
SPH	6900	Doctoral Capstone	3 SCH

- Students should enroll in the Doctoral Capstone (SPH 6900) at the conclusion of all coursework.
- Students must obtain a permission number from their major professor to register for SPH 6900.

### PRACTICE EXPERIENCE: 4 SCH

SPH	6860	Public Health Practice Residency	4 SCH
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### REQUIRED COURSES: 18 SCH

BIOS	5720	Survey Sampling	3 SCH
BIOS	5725	Nonparametric Statistical Methods	3 SCH
BIOS	5760	Data Management	3 SCH
BIOS	6760	Multivariate Analysis	3 SCH
BIOS	6775	Clinical Trials and Survival Analysis	3 SCH
BIOS	6785	Biostatistical Research and Consulting	3 SCH

### ELECTIVE COURSES: 12 SCH

BIOS	6750	Applied Categorical Data Analysis	3 SCH
BIOS	6910	Doctoral Independent Study in Biostatistics	1-3 SCH
EPID	5300	Survey Methodology	3 SCH
EPID	5610	Chronic Disease Epidemiology	3 SCH
EPID	5630	Infectious Disease Epidemiology	3 SCH
HMAP	5240	Health Politics and Policy	3 SCH
HMAP	5245	Health Economics	3 SCH
HMAP	5260	Health Information Systems	3 SCH
HMAP	6200	Organizational Management	3 SCH
HMAP	6210	Health Services Research I	3 SCH
SCBS	6400	Research Methods in Social and Behavioral Sciences	3 SCH

### CULMINATING EXPERIENCE: 9 SCH

SPH	6950	Dissertation	9 SCH
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## Biostatistics DrPH Qualifying Examination

Dr.P.H. students in the biostatistics concentration are required to pass a qualifying exam which is given in the second week of November each year. The exam covers material from six courses: BIOS 5720 Survey Sampling; BIOS 5725 Nonparametric Statistical Methods; BIOS 5760 Data Management; BIOS 6760 Multivariate Analysis; BIOS 6775 Clinical Trials and Survival Analysis; BIOS 6785 Biostatistical Research and Consulting. In order to take the exam a student must have a grade point average of 3.0 or higher in graduate level biostatistics courses. Students are responsible for informing the Department of Biostatistics of their intentions to take the exam. A student who encounters a last minute emergency (sickness, death in the family, etc.) may appeal to the exam committee for an opportunity to take a makeup exam. Students who fail the exam may, upon recommendation of the committee, be allowed to retake a different exam or given an oral exam. However, an opportunity for retaking the exam or the oral exam is not automatic.

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