



Department of Biostatistics

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**DrPH in Biostatistics
 Academic Year 2008-2009**

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. Plan and conduct independent research focusing on the analysis and solution of a problem in public health practice.
2. Assist in the planning, development, and evaluation of health systems, health programs, and surveillance systems.
3. Analyze and solve public health issues by applying statistical methodology.
4. Communicate finding of the analysis and solution of a problem of public health importance in professional journals.
5. Conduct experimental research in public health such as clinical and community trials in collaboration with other health professionals.

DrPH Prerequisites (30 Semester Credit Hours)

BIOS	5210	Biostatistics for Public Health I	3 SCH
BIOS	5215	Biostatistics for Public Health II	3 SCH
BIOS	5725	Nonparametric Statistical Methods*	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	5115	Behavioral Foundations of Public Health	3 SCH

* This course may be substituted with other biostatistics course with the written approval of advisor.

Biostatistics DrPH Curriculum (65 Semester Credit Hours)

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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- The Public Health Practice Residency will be managed by the Department of Epidemiology. Dr.P.H. students should refer to the Public Health Practice Residency Manual on the School of Public Health website for general guidance and policy. However, there may be additional departmental requirements related to the above policy, and students are advised to check with their advisors about them.

REQUIRED COURSES: 12 SCH

BIOS	6700	Probability and Statistical Inference	3 SCH
BIOS	6750	Applied Categorical Data Analysis	3 SCH
BIOS	6775	Clinical Trials and Survival Analysis	3 SCH
BIOS	6785	Biostatistical Research and Consulting	3 SCH

ELECTIVE COURSES: 18 SCH

BIOS	6795	Topics in Biostatistics	3 SCH
BIOS	6720	Applied Methods of Survey Sampling	3 SCH
BIOS	6760	Multivariate Analysis	3 SCH
BIOS	6910	Doctoral Independent Study in Biostatistics	1-3 SCH
EPID	6200	Experimental Methods in Epidemiology	3 SCH
EPID	6615	Epidemiologic Surveillance	3 SCH
HMAP	6210	Health Services Research I	3 SCH
SCBS	6170	Qualitative Research Methods	3 SCH
SCBS	6400	Research Methods in Social and Behavioral Sciences	3 SCH

- Students may substitute an elective course not on this list only with prior written approval of their advisor.
- Courses not approved as substitutes will not be applied toward the degree plan.

CULMINATING EXPERIENCE: 9 SCH

SPH 6950 Dissertation

9 SCH

Biostatistics DrPH Qualifying Examination

The qualifying examination tests mastery of material in courses offered by the Department of Biostatistics, including but not limited to clinical research methods, data management, and statistical analysis. The possible outcomes of taking the qualifying examination are Pass and Fail. Students who receive a Fail must retake the examination. No more than two attempts are allowed to earn a Pass on the examination. Students will not be allowed to register for dissertation hours before receiving a Pass on the examination. Students must complete all coursework before taking the examination and have a grade point average of 3.0 or higher in all doctoral-level coursework. Students are responsible for informing the Department of Biostatistics of their intention to take the examination. If a student does not complete the examination during the scheduled time, a grade of "Fail" is automatically recorded. However, students may reschedule the examination with prior written approval of their advisor at least six weeks in advance of the scheduled examination time.