

Biostatistics

Zoran Bursac, *Professor and Chair*

Michelle Hospital, *Research Associate Professor*

Nan Hu, *Associate Professor*

Boubakari Ibrahimou, *Associate Professor*

Tan Li, *Associate Professor*

Gabriel Odom, *Assistant Professor*

Emir Veledar, *Courtesy Professor*

Changwon Yoo, *Associate Professor*

The Department offers a major in Biostatistics for the College's MPH degree, which covers basic applied biostatistics especially as required for public health and community health research and practice.

MPH in Biostatistics

Biostatistics is a field that facilitates the conduct of health and medical research through a focus on designing sound experiments and studies relevant to human health and through the process of collecting, managing, analyzing and interpreting data. Biostatisticians collaborate in the identification and refinement of important research questions and in the methods and procedures required to obtain high quality and reliable answers to these questions. There remains a shortage of professional biostatisticians and the field provides meaningful and rewarding careers for those interested and able to go down this path.

Admission Requirements

Applicants must meet the University's general graduate admission requirements:

1. A Bachelor's degree or equivalent from an accredited college or university or, in the case of foreign students, an institution recognized in its own country as preparing students for further study at the graduate level.
2. A minimum 3.0 GPA on the last 60 under-graduate hours. In addition, applicants are required to submit 1) a current resume; and 2) a written statement of purpose (career goals). Applicants are also encouraged to submit three letters of recommendation.
3. International graduate student applicants whose native language is not English are required to submit a score for the Test of English as a Foreign Language (TOEFL) or for the International English Language Testing System (IELTS). A total score of 80 on the iBT TOEFL or 6.5 overall on the IELTS is required. Students with diverse backgrounds are encouraged to apply.
4. Submission of official GRE scores are optional. If a student decides to submit GRE scores, the scores must be less than 5 years old.
5. Preference will be given to applicants having completed coursework in mathematics through calculus.

MPH Core Curriculum: (15 credits)

PHC 6000	Epidemiology I: Introduction to Public Health Epidemiology	3
PHC 6052	Biostatistics I	3
PHC 6102	Introduction to Public Health Policy and Management	3

PHC 6315	Introduction to Environmental Health Sciences	3
PHC 6410	Health Behavior and Public Health	3

Major in Biostatistics: (15 credits)

PHC 6056	Longitudinal Health Data Analysis	3
PHC 6064	Applied Statistical Methods for Discrete Data	3
PHC 6080	SAS Computing for Health Sciences	3
PHC 6091	Biostatistics 2	3
PHC 6059	Survival Data Analysis	3

Electives for Biostatistics: (9 credits)

PHC 6055	Data Management and Epidemiologic Analysis Using SAS/SPSS	3
PHC 6099	R Computing for Health Sciences	3
PHC 7719	Multivariate Methods in Health Sciences Research	3
PHC 6067	Probabilistic Graphical Models	3
PHC 6907	Independent Study: Public Health	3
PHC 6931	Special Topic in Biostatistics	3

Practicum and Culminating Experience: (6 credits)

PHC 6945	Practicum in Public Health	3
PHC 6930C	Integrative Seminar in Public Health	3

PHC 6945 (Practicum) and PHC 6930C (culminating experience) are both required for all MPH students. The Practicum may be taken after completing a minimum of 30 hours, including all core courses. The Practicum may be waived if the student has at least 3 years of relevant practice experience working in a public health practice setting. The waiver request is prepared and submitted by the student, through their Faculty Advisor and Department Chair, for final approval/disapproval by the Academic Public Health Director. If the Practicum requirement is waived, the student will need to substitute 3 additional approved hours so that the total curriculum hour requirement of 45 is met. MPH students are expected to complete PHC 6930C Integrative Seminar in Public Health during their last semester in the program.

For additional and updated information about degrees offered, entrance requirements, and services, please visit the College's website: <http://stempel.fiu.edu>.

Doctor of Philosophy in Public Health Major in Biostatics and Data Analytics

Doctoral Requirements

A student must enroll for dissertation credits after completing all coursework, passing the candidacy examination, and being advanced to candidacy. Dissertation credits cannot be taken before advancement to candidacy.

This candidacy/qualifying examination requires both a written and an oral examination. The examination should be completed after a minimum of 33 credits in residence and no later than the sixth term of study (including the summer term). The student must meet the University's registration requirements at the time they take the exam. The student should register in the term in which they plan to take the qualifying examination. A candidacy examination may not be passed conditionally. A "Pass" on the examination cannot be made contingent upon other factors

such as the completion of additional coursework or the preparation of extra research projects. After a doctoral student is admitted to candidacy, continuous registration for at least three dissertation credits is required until the dissertation requirement is fulfilled.

Required Courses

The program requires a minimum of 75 credit hours beyond the baccalaureate, including a minimum of 15 hours of dissertation credits. There are three components to the College Ph.D. curriculum. The first component is a core curriculum shared across all public health majors (12 credit hours). The second component is specific to biostatistics and data analytics (48 credit hours) and doctoral seminar (0 credit hours). Students will attend meetings of the doctoral seminar during each fall and spring semester before dissertation completion. The third component consists of the dissertation, including 15 dissertation credit hours.

Shared Core Courses: (12 credits)

PHC 6601	Emerging Issues in Public Health	3
PHC 6091	Biostatistics 2	3
PHC 7705	Methods in Evidence Based Public Health	3
PHC 7981	Research Concepts and Proposal Development	3

Courses for a Major in Biostatistics and Data Analytics

A minimum of 48 credit hours which include 12 hours in Biostatistics Core Courses, 36 hours in Biostatistics Elective Courses or appropriate other electives as determined by the doctoral mentor, and 0 credits of doctoral seminar*

Department reserves the right to offer seminar for credit.

Biostatistics and Data Analytics Core Courses (12 credits)

PHC 7050	Advanced Biostatistics I	3
PHC 7051	Advanced Biostatistics II	3
PHC 7054	Advanced Biostatistics III	3
PHC 6099	R Computing for Health Sciences	3
OR		
PHC 6080	SAS Computing for Health Sciences	3

Biostatistics and Data Analytics Elective Courses (36 credits)

PHC 6056	Longitudinal Data Analysis	3
PHC 6059	Survival Data Analysis	3
PHC 6060	Principles and Approaches to Biostatistical Consulting	3
PHC 6064	Applied Statistical Methods for Discrete Data	3
PHC 6067	Probabilistic Graphical Models	3
PHC 6080	SAS Computing for Health Sciences	3
PHC 6084	Introduction to Bayesian Inference	3
PHC 6099	R Computing for Health Sciences	3
PHC 6701	Advanced R Computing	3
PHC 6931	Special Topics in Biostatistics	1-3
PHC 7064	Applied Structural Equation Modeling	3
PHC 7083	Advanced Bayesian Inference	3
PHC 7719	Multivariate Methods in Health Sciences Research	3
PHC 7982	Public Health Pre-Dissertation Research	1-6

Doctoral Seminar (0* credits)

PHC 7933	Seminar in Biostatistics	1-6
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Students will be required to participate in the doctoral seminar every fall and spring semester from the start of the program. Seminar attendance carries 0 credits unless offered for credit by the department.

Dissertation Requirements: (15 credits)

PHC 7980	Dissertation	3
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