

**University of South Florida, College of Public Health**  
**Department of Epidemiology and Biostatistics**

**MPH: BIostatISTICS**

The MPH program in Biostatistics provides educational opportunities for students to acquire a broad knowledge in biostatistics and apply biostatistical methods to public health problems. The MPH program emphasizes the applications of quantitative methods to a broad range of public health problems. The intended audience of the program includes individuals with strong quantitative background and interests in a professional career in a public health setting. The program trains students to be able to design studies, to implement data collection and management plans, to formulate analysis plans and conduct analysis, and to report and communicate analytical results. The program will also provide students with knowledge in statistical and computational methods and public health.

**Competencies:** Upon graduation, in addition to the overall **Master of Public Health** degree competencies, a student with a concentration in *Biostatistics* should be able to...

1. Apply biostatistical methods to the design of experimental and observational studies with respect to sample selection, randomization, and power.
2. Apply common probability distributions to public health outcomes.
3. Use statistical techniques including descriptive statistics, data exploration, estimation, hypothesis testing, and modeling.
4. Demonstrate basic data management skills and use common statistical software packages for data analysis.
5. Communicate effectively to public health practitioners in terms of formulating research problems and interpreting statistical results.
6. Read and interpret scientific literature on selected public health topics.
7. Demonstrate knowledge of ethical issues related to the use of biostatistics in public health.
8. Develop written and oral presentations based on statistical analyses and field experience.
9. Demonstrate knowledge and understanding of public health issues.

## Association between the courses and the competencies for MPH in Biostatistics

Courses	Competencies										
<b>Core Courses(15)</b>	1	2	3	4	5	6	7	8	9		
PHC6000									√		
PHC6102									√		
PHC6357									√		
PHC6410					√				√		
PHC6058		√	√								
<b>Concentration Courses (15)</b>	1	2	3	4	5	6	7	8	9		
PHC6053	√	√	√	√	√						
PHC6051			√								
PHC6060	√				√	√		√			
PHC6020	√						√				
PHC6055		√									
<b>Elective Courses (9)</b>	1	2	3	4	5	6	7	8	9		
PHC6701				√							
PHC6934			√								
PHC6190				√							
PHC6054	√						√				
PHC6056	√										
PHC6907											
<b>Culminating Experiences(6)</b>	1	2	3	4	5	6	7	8	9		
PHC6945								√			
PHC6977						√		√			
PHC6936					√		√		√		

## The courses for MPH with concentration in Biostatistics

<b>College Core Courses</b>			<b>Total needed</b>	<b>15</b>
PHC	6000	Epidemiology		3
PHC	6102	Principles of Health Policy and Management		3
PHC	6357	Environmental and Occupational Health		3
PHC	6410	Social and Behavioral Sciences Applied to Health		3
PHC	6058	Biostatistical Inference I		3
<b>Required Concentration Courses</b>			<b>Total needed</b>	<b>15</b>
PHC	6053	Categorical Data Analysis		
PHC	6051	Biostatistics II		
PHC	6060	Case Studies and Collaboration		
PHC	6020	Design and Conduct of Clinical Trials		
PHC	6055	Survival Analysis		
<b>Electives Courses</b>			<b>Total needed</b>	<b>9</b>
PHC	6701	Computer Applications for Public Health Researchers		
PHC	6934	Linear Model Analysis of health Data		
PHC	6190	Public Health Data Base Management		
PHC	6054	Design and Analysis of experiments for Health Researchers		
PHC	6907	Independent Study		
<b>Culminating Experiences</b>			<b>Minimum needed</b>	<b>7-18</b>
PHC	6945	Supervised Field Experience (3 credits minimum)		
PHC	6977	Special Project		
PHC	6936	Public Health Capstone course		