MASTER OF PUBLIC HEALTH IN THE FIELD OF BIOSTATISTICS

Program Director: H. Hoffman

Mission
The mission of the Biostatistics Program is to educate graduate students in developing the necessary methodological and quantitative skills to successfully apply statistical methods to the biological, biomedical, and health services sciences. In addition to enhancing students’ capacity to think critically and creatively, the Program should deepen their commitment to improving the public’s health, to engaging in and promoting public service – qualities that are essential for future biostatisticians and public health practitioners.

Goals
The goals of the Biostatistics Program are to ensure that graduates:

- Understand and adhere to high scientific standards for research;
- Understand how to apply statistical methods to biological/biomedical sciences and health services;
- Understand and follow guidelines for ethical treatment of research participants;
- Communicate research findings to a lay audience; and
- Respect cultural diversity throughout all of the above.

COMPETENCIES
The specialization in biostatistics focuses on developing students’ skills in the statistical analysis and interpretation of health research data. The following competencies were developed in concert with professors of biostatistics courses (at GW as well as from other CEPH-accredited MPH programs), biostatistics textbooks, conversations with prospective employers likely to hire MPH-biostatistics graduates, and with experience teaching biostatistics courses to MPH students. ASPH Education Committee competencies were also consulted.

Upon completion of the Master of Public Health in the field of biostatistics, students will demonstrate functional competence to:

- Manipulate various databases from large scale epidemiological studies and clinical trials studies using statistical software, e.g. SAS®.

  Relevant courses
  
  PUBH 6014 Practicum
  PUBH 6015 Culminating Experience
  PUBH 6249 StatPackages/DataMgt&DataAnlys

- Use theoretical biostatistical concepts in an applied setting to identify the appropriate data analysis methods for public health and biomedical studies including cohort, case control, cross-sectional, and clinical trials.

  Relevant courses
  
  PUBH 6252 Advanced Epidemiology Methods
  PUBH 6258 Adv Topics/Biostat Consulting
  PUBH 6260 Adv DataAnalysis-Public Health
  PUBH 6266 Biostatistical Methods

- Synthesize data and relevant literature and interpret findings from statistical analyses in a causal framework, in order to prepare manuscripts and make oral presentations for both professional and lay audiences.

  Relevant courses
  
  PUBH 6014 Practicum
  PUBH 6015 Culminating Experience
  PUBH 6249 StatPackages/DataMgt&DataAnlys
  PUBH 6258 Adv Topics/Biostat Consulting
  PUBH 6260 Adv DataAnalysis-Public Health
  PUBH 6264 Quantitative Methods
  PUBH 6266 Biostatistical Methods

- Work as a member of a multidisciplinary research team and recognize and appropriately respond to ethical issues that arise in research.

  Relevant courses
  
  PUBH 6014 Practicum
  PUBH 6015 Culminating Experience
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<tr>
<td>PUBH 6247</td>
<td>Design of Health Studies</td>
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<td>StatPackages/DataMgt&amp;DataAnlys</td>
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<tr>
<td>PUBH 6261</td>
<td>Epi-Bio Skills Bldg Seminar</td>
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- Provide biostatistical advice as a member of a team of researchers engaged in a biomedical or epidemiological research project.

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- Apply biomedical and epidemiological concepts in identifying and describing the determinants and the distribution of disease in human populations which is the necessary background for successful participation in studies of health and disease.

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- Identify and assess patterns of emerging diseases to postulate hypotheses and to propose appropriate strategies in order to quantitatively evaluate the impact of health problems.

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REQUIREMENTS

**Program Prerequisites**

All applicants to the MPH Biostatistics degree program must have completed two semesters of college level calculus through calculus II with a grade of B or better to be considered for admission.

**Course Requirements**

The MPH degree program in biostatistics consists of 45 credits. These credits are based on a series of core courses (15 credits) and program-specific courses (20 credits), and electives (6 credits). The total 45-credit program also includes a practicum (2 credits) and a culminating experience (2 credits) where students apply their didactic education in a real-world setting.

Begin planning your practicum during Year 1.

**Program Requirements**

**Required core courses**

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<tr>
<td>PUBH 6001</td>
<td>BiologicalConcepts/PublicHlth</td>
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<td>PUBH 6002</td>
<td>Biostatistical Applic for PubH</td>
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<td>PUBH 6003</td>
<td>Prin &amp; Practice/Epidemiology</td>
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Master of Public Health in the Field of Biostatistics

Required program-specific courses

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<tr>
<td>PUBH 6004</td>
<td>Environmental and Occupational Health in a Sustainable World</td>
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<tr>
<td>PUBH 6006</td>
<td>Mgt &amp; Policy Approaches to PH</td>
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<tr>
<td>PUBH 6007</td>
<td>Social&amp;BehaviorAppr-Pub.Hlth</td>
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Electives

Select epi-biostatics courses with advisor’s approval

Practicum and culminating experience

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Graduation Requirements

1. Graduate credit requirement: 45 graduate credits
2. Course requirements: Successful completion of core and program-specific courses
3. Grade point requirement: 3.0 (B average) overall grade point average
4. Time limit requirement: The degree must be completed within four years.
5. Transfer credit policy: Up to 12 graduate credits that have not been applied to a previous graduate degree may be transferred to the Master of Public Health program. Up to 18 credits may be transferred to the Master of Public Health from the SPH graduate certificate. Credits must have been earned from an accredited institution in the last 3 years with a grade point of 3.0 or better.