MASTER OF SCIENCE IN THE FIELD OF EPIDEMIOLOGY

Program Director S.D. Cleary

The Department of Epidemiology and Biostatistics offers the master of science (MS) in the field of epidemiology degree program. The goals of the program are to prepare students for careers in industry or academia and for continued study in a doctoral program. The program includes course work that focuses on theoretical and applied epidemiological and statistical methods.

If desired, a student may apply for admission to the doctorate of philosophy (PhD) in the field of epidemiology degree program (http://bulletin.gwu.edu/public-health/epidemiology-biostatistics/phd-epidemiology) prior to completing the MS degree, in which case a maximum of 24 credits from the MS degree may be applied to the PhD coursework requirements. In this instance, the student will be required to take a minimum of 27 additional credits of course work. The distribution of these courses between epidemiology and statistics depends on the nature of the master’s degree and whether the transferred credits will be used to defray epidemiology and statistics course work.

Specific admission requirements are shown on the Graduate Program Finder. (http://www.gwu.edu/all-graduate-programs)

Required Prerequisites* for applicants to the MS, Epidemiology are:

- Calculus I and II- 6 credits
- Human Biology- 8 credits

And, these courses are Highly Recommended Admissions Prerequisites^:

- Linear Algebra- 3 credits
- SAS- 3 credits

Specific admission requirements are shown on the Graduate Program Finder. (http://www.gwu.edu/all-graduate-programs)

Visit the program website (http://publichealth.gwu.edu/programs/epidemiology-ms) for additional program information.

REQUIREMENTS

Preparatory Requirements

The courses listed below (or equivalents) are prerequisites for admission consideration, and must appear on the student’s transcript.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 1115</td>
<td>Introductory Biology: Cells and Molecules and Introduction to Cells and Molecules Laboratory</td>
<td></td>
</tr>
<tr>
<td>BISC 1125</td>
<td>Introductory Biology: The Biology of Organisms and Introduction to Organisms Laboratory</td>
<td></td>
</tr>
<tr>
<td>MATH 1231</td>
<td>Single-Variable Calculus I</td>
<td></td>
</tr>
<tr>
<td>MATH 1232</td>
<td>Single-Variable Calculus II</td>
<td></td>
</tr>
</tbody>
</table>

Additional Course Requirements

Applicants lacking the courses listed below (or equivalents to these GW courses) will be considered for admission, but will be eligible for conditional admission only with the expectation that these courses will be completed satisfactorily within two semesters following matriculation in the program.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 2183</td>
<td>Intermediate Statistics Lab/Packages</td>
<td></td>
</tr>
<tr>
<td>or PUBH 6249</td>
<td>Use of Statistical Packages: Data Management and Data Analysis</td>
<td></td>
</tr>
</tbody>
</table>

Program Requirements

The following requirements must be fulfilled: 33 credits, including 17 credits in core courses and 13 credits in elective courses, and 3 credits in consulting and thesis.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBH 6003</td>
<td>Principles and Practices of Epidemiology (basis for MS general comprehensive)</td>
<td></td>
</tr>
<tr>
<td>PUBH 6247</td>
<td>Design of Health Studies (basis for MS general comprehensive)</td>
<td></td>
</tr>
<tr>
<td>PUBH 6252</td>
<td>Advanced Epidemiology Methods (basis for MS general comprehensive)</td>
<td></td>
</tr>
<tr>
<td>PUBH 6299</td>
<td>Topics in Epidemiology and Biostatistics (credits vary per course- may take 1 or 2 courses)</td>
<td></td>
</tr>
</tbody>
</table>

Statistics core

One of the following:
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 4157 &amp; STAT 4158</td>
<td>Introduction to Mathematical Statistics I and Introduction to Mathematical Statistics II</td>
</tr>
<tr>
<td>STAT 6201 &amp; STAT 6202</td>
<td>Mathematical Statistics I and Mathematical Statistics II (students interested in applying to the PhD program in epidemiology may register in STAT 6201 &amp; STAT 6202 with advisor's approval)</td>
</tr>
</tbody>
</table>

**Electives**

13 credits from the following:

- Approved public health elective courses:
  - PUBH 6001 Biological Concepts in Public Health
  - PUBH 6002 Biostatistical Applications for Public Health
  - PUBH 6004 Environmental and Occupational Health in a Sustainable World
  - PUBH 6007 Social and Behavioral Approaches to Public Health
  - PUBH 6121 Environmental and Occupational Epidemiology
  - PUBH 6123 Toxicology; Applications for Public Health Policy
  - PUBH 6124 Problem Solving in EOH
  - PUBH 6242 Clinical Epidemiology and Public Health: Reading the Research
  - PUBH 6243 Topics in Clinical Epidemiology and Public Health: Reading the Research
  - PUBH 6244 Cancer Epidemiology
  - PUBH 6245 Infectious Disease Epidemiology
  - PUBH 6250 Epidemiology of HIV/AIDS
  - PUBH 6260 Advanced Data Analysis for Public Health
  - PUBH 6262 Introduction to Geographic Information Systems
  - PUBH 6283 Biostatistics Consulting Practicum
  - PUBH 6299 Topics in Epidemiology and Biostatistics

- Approved statistics elective courses:
  - STAT 2118 Regression Analysis
  - STAT 4181 Applied Time Series Analysis
  - STAT 3187 Introduction to Sampling

**Consulting and thesis**

- PUBH 6258 Advanced Topics in Biostatistical Consulting
- PUBH 6999 Master of Science in Epidemiology Thesis

*Honors Program students and those who have been invited to join the Scholars in Quantitative and Natural Sciences (SQNS) Program take BISC 1120 instead of BISC 1125 for the lab component.

**Graduation Requirements**

1. Graduate Credit Requirement: 33 graduate credits are required.
2. Comprehensive Exam: successful completion of a written comprehensive exam upon completion of all coursework.
3. Grade Point Requirements: A 3.0 (B average) overall grade point average is required.
4. Time Limit Requirement: The MS must be completed within 4 years.