DOCTOR OF PHILOSOPHY IN THE FIELD OF EPIDEMIOLOGY

Program Director S. Cleary

The purpose of the doctor of philosophy program is to prepare students for a career in epidemiologic research in an academic, government, or industry setting. The PhD graduate is expected to have knowledge across a wide range of epidemiologic theories and methods and specific knowledge of the epidemiology of one of the following areas: chronic disease, infectious disease, environmental and occupational health.

Doctoral students are required to pass a written comprehensive examination and to complete a dissertation.

At the completion of the doctoral program in epidemiology students should be able to:

- Demonstrate understanding of general and specialized epidemiologic concepts;
- Develop a research protocol;
- Conduct and analyze data from a research study; and
- Disseminate research findings.

Admissions Requirements

Applicants must hold an undergraduate degree from an accredited institution of higher learning. Although not required, most admitted students have completed a master’s degree prior to admission. Before applying, applicants must provide evidence of the completion of these required prerequisites:

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

And, the following courses are highly recommended admission prerequisites:

- Linear Algebra- 3 credits
- SAS- 3 credits

If desired, a student may complete the MS or MPH program prior to admission to the PhD degree program, in which case no more than 24 credits from these degrees may be applied to the PhD coursework requirements. In this instance the student is required to take a minimum of 27 additional credits of coursework plus dissertation research credits. The distribution of these courses between epidemiology and statistics depends on the nature of the master’s degree and whether the transferred credits are used to defray epidemiology or statistics coursework. All applications are submitted through SOPHAS.org (http://SOPHAS.org).

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

REQUIREMENTS

The following requirements must be fulfilled:

72 credits, including 16 credits in public health core courses, and all requirements for the Doctor of Philosophy Program (http://bulletin.gwu.edu/arts-sciences/doctoraltext); 12 to 15 credits in statistics core courses (depending on which option the student follows); 3 credits in program-specific epidemiology selective courses; a minimum of 14 to 17 credits in elective courses, depending on which option the student follows; 3 credits in consulting courses; and 12 to 21 credits in dissertation research; successful completion of a comprehensive exam.

Two program options are available: Option A is more quantitative and includes advanced statistical coursework in the Department of Statistics. Option B, while also quantitative, allows for courses and electives with a primary focus on public health.

Preparatory Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BISC 1115 &amp; BISC 1126</td>
<td>Introductory Biology: Cells and Molecules and Introduction to Organisms Laboratory</td>
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<tr>
<td>BISC 1116 &amp; BISC 1126</td>
<td>Introductory Biology: The Biology of Organisms and Introduction to Organisms Laboratory</td>
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<tr>
<td>MATH 1231</td>
<td>Single-Variable Calculus I</td>
<td></td>
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<tr>
<td>MATH 1232</td>
<td>Single-Variable Calculus II</td>
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<tr>
<td>MATH 2233</td>
<td>Multivariable Calculus (option A only)</td>
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Additional course requirements for admissions consideration

The courses listed below are additional course preparatory requirements. Applicants lacking these courses (or equivalents to these GW courses) will be considered for admission, but will be admitted conditionally with the expectation that these courses will be completed within two semesters following matriculation in the program. Credit for these courses does not count toward the 72 credits required for the degree and grades earned are not reflected in the overall grade-point average.
## Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PUBH 6003</td>
<td>Principles and Practices of Epidemiology</td>
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<tr>
<td>PUBH 6247</td>
<td>Design of Health Studies</td>
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<tr>
<td>PUBH 6252</td>
<td>Advanced Epidemiology Methods</td>
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<td>PUBH 8419</td>
<td>Measurement in Public Health and Health Services</td>
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<td>PUBH 6080</td>
<td>Pathways to Public Health</td>
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<tr>
<td>PUBH 6123</td>
<td>Toxicology: Applications for Public Health Policy</td>
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<td>PUBH 6124</td>
<td>Risk Management and Communication</td>
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<tr>
<td>PUBH 6260</td>
<td>Advanced Data Analysis for Public Health</td>
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<tr>
<td>PUBH 6262</td>
<td>Introduction to Geographic Information Systems</td>
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<tr>
<td>PUBH 6263</td>
<td>Advanced GIS</td>
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<tr>
<td>PUBH 6267</td>
<td>Time Series Applications in Public Health</td>
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<tr>
<td>PUBH 6268</td>
<td>Advanced SAS</td>
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<tr>
<td>PUBH 6269</td>
<td>Topics in Epidemiology and Biostatistics</td>
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### Electives

14 to 17 credits (depending on whether Option A or Option B was selected. See above.) in graduate-level elective courses in PUBH, HSML, EXNS, or STAT.* Examples of such courses include:

- PUBH 6123: Toxicology: Applications for Public Health Policy
- PUBH 6124: Risk Management and Communication
- PUBH 6260: Advanced Data Analysis for Public Health
- PUBH 6262: Introduction to Geographic Information Systems
- PUBH 6263: Advanced GIS
- PUBH 6267: Time Series Applications in Public Health
- PUBH 6268: Advanced SAS
- PUBH 6269: Topics in Epidemiology and Biostatistics

Other electives as approved in advance by the program director.

### Statistics electives (for students pursuing Option A)

- STAT 6213: Intermediate Probability and Stochastic Processes
- STAT 6215: Applied Multivariate Analysis I
- STAT 6216: Applied Multivariate Analysis II
- STAT 6217: Design of Experiments
- STAT 6223: Bayesian Statistics: Theory and Applications
The epidemiology program director may waive the consulting requirement based on written documentation of prior equivalent coursework or relevant work experience. Waiver of the consulting requirement increases the total required number of elective credits proportionally.

**Dissertation research**

12 to 21 credits of the following:

- PUBH 8999 Dissertation Research (taken in units of 3 credits)

*Total required elective credits varies depending on whether the student is following Option A or Option B. This also will be affected if the consulting requirement is waived.

**Graduation Requirements**

1. **Program options:** Students may choose either curriculum Option A or curriculum Option B for the Doctor of Philosophy degree in the field of epidemiology.

2. **Graduate credit requirement:** 72 graduate credits are required.

3. **Prerequisites:** Review official program guide for minimum prerequisite requirements for admission.

4. **Comprehensive (General) exam:** successful completion within 24 months of matriculation.

5. **Dissertation:** 12 to 21 credits of dissertation research are required.

6. **Grade-point requirements:** An overall GPA of 3.0 (B average) is required.

7. **Time limit requirement:** The degree must be completed in 8 years.

8. **Transfer credit policy:** Up to 24 credits from an applicable master's program may be approved to be transferred to the doctoral program. Transferred courses must have received a grade of B or above and earned at an accredited institution.