Epidemiology and Biostatistics: Epidemiology, PhD

The mission of the PhD program in Epidemiology is to train independent researchers in the development and application of epidemiologic methods and to prepare them for positions as scientific leaders in academia and industry. The PhD is a research degree; it indicates the highest attainable level of scholarship, and a commitment to a research career. The PhD does not represent merely the accumulation of course credits, but rather the development and completion of a well-designed and conscientious program of scientific investigation that makes a unique contribution to the field of epidemiology.

For more information: [https://www.med.upenn.edu/ggeb/ggeb-courses.html](https://www.med.upenn.edu/ggeb/ggeb-courses.html)

View the University’s Academic Rules for PhD Programs ([http://catalog.upenn.edu/pennbook/academic-rules-phd/](http://catalog.upenn.edu/pennbook/academic-rules-phd/)).

### Required Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Course Units</th>
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<tbody>
<tr>
<td>EPID 5340</td>
<td>Qualitative Methods in the Study of Health, Disease and Medical Systems</td>
<td></td>
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<tr>
<td>EPID 6000</td>
<td>Data Science for Biomedical Informatics</td>
<td></td>
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<tr>
<td>EPID 7010</td>
<td>Introduction to Epidemiologic Research</td>
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<td>Ethics Elective</td>
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<tr>
<td>Additional Electives</td>
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<tr>
<td><strong>Research</strong></td>
<td></td>
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<tr>
<td>EPID 6990</td>
<td>Lab Rotation</td>
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<tr>
<td>EPID 8990</td>
<td>Pre-Dissertation Lab Rot</td>
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<tr>
<td>EPID 9950</td>
<td>Dissertation</td>
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<tr>
<td>EPID 7000</td>
<td>Doctoral Seminar in Epidemiology</td>
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<tr>
<td>EPID 7020</td>
<td>Advanced topics in Epidemiologic Research</td>
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<tr>
<td>BSTA 6300</td>
<td>Statistical Methods and Data Analysis I</td>
<td></td>
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<tr>
<td>BSTA 6320</td>
<td>Statistical Methods for Categorical and Survival Data</td>
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<tr>
<td>HPR 6080</td>
<td>Applied Regression Analysis for Health Policy Research</td>
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<tr>
<td>Career Development Research Workshop</td>
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The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2022 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.

### Sample Plan of Study

#### Year 1

**Fall**
- EPID 7010 Introduction to Epidemiologic Research
- EPID 6000 Data Science for Biomedical Informatics
- BSTA 6300 Statistical Methods and Data Analysis I
- EPID 6990 Lab Rotation
- Career Development Workshop Series

**Spring**
- EPID 7020 Advanced topics in Epidemiologic Research
- HPR 6080 Applied Regression Analysis for Health Policy Research
- BSTA 6320 Statistical Methods for Categorical and Survival Data
- EPID 6990 Lab Rotation
- Advanced Elective

- Career Development Workshop Series

**Summer**
- EPID 6990 Lab Rotation
- Advanced Elective (requires special permission)

#### Year 2

**Fall**
- EPID 5340 Qualitative Methods in the Study of Health, Disease and Medical Systems
- EPID 6990 Lab Rotation 2
- or EPID 8990 Pre-Dissertation Lab Rot
- Ethics Course OR MSCE Bioethics Workshop
- Advanced Elective

**Spring**
- EPID 7000 Doctoral Seminar in Epidemiology
- EPID 6990 Lab Rotation 2
- or EPID 8990 Pre-Dissertation Lab Rot
- Advanced Elective

#### Year 3

**Fall**
- EPID 8990 Pre-Dissertation Lab Rot
- Advanced Elective

**Spring**
- EPID 8990 Pre-Dissertation Lab Rot
- Advanced Elective

#### Year 4 and Beyond

- EPID 9950 Dissertation

For those desiring a more advanced statistical analysis background, BSTA 6300 and BSTA 6320 are recommended if you have previously completed coursework in calculus through multivariable calculus and linear algebra. The permissions of the instructors are required to take these courses.
HPR 6080 is required for those not taking BSTA 6300 and BSTA 6320.

Any electives taken in the summer required prior authorization by the heads of the PhD Curriculum Committee.