1. Prerequisites

Students applying to the PhD in biostatistics must have completed a master’s degree program (MPH or MS) in biostatistics or a related field. With approval of the department and the graduate dean, up to 40 credit hours from the master’s program may be counted toward the PhD.

Depending on the student’s background, the advisory committee may require the student to enroll in additional elective courses that cover topics that are ordinarily completed in the MS or MPH curricula as prerequisites for doctoral level courses. These may be completed after enrolling in the PhD program. These include the following courses:

COPH Core Courses, one of the following: 3 credit hours
- HAP 5453 U.S. Health Care System
- OEH 5013 Environmental Health
- HPS 5213 Social & Behavioral Sciences in Public Health

BSE Required Courses 19 hours total
- BSE 5001 Problems in Biostatistics and Epidemiology
- BSE 5013 Applications of Microcomputers to Data Analysis
- BSE 5113 Principles of Epidemiology
- BSE 5163 Biostatistics Methods I
- BSE 5173 Biostatistics Methods II
- BSE 5193 Intermediate Epidemiologic Methods
- BSE 5663 Analysis of Frequency Data
2. Required Courses

The student must earn at least 30 credit hours in coursework at the University of Oklahoma after admission to the PhD program. The student is required to take the following courses as either a PhD student or in completing the MS or MPH degree:

**Graduate College**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSE 5111</td>
<td>Scientific Integrity in Research</td>
<td>1</td>
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</table>

**BSE Required Courses**

**General /Epidemiology Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSE 5153</td>
<td>Clinical Trials</td>
<td></td>
</tr>
<tr>
<td>BSE 6192</td>
<td>Grant Writing</td>
<td></td>
</tr>
<tr>
<td>BSE 6194</td>
<td>Advanced Epidemiologic Methods</td>
<td></td>
</tr>
</tbody>
</table>

**Theory Courses**

During the first year of doctoral coursework

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSE 5703</td>
<td>Principles of the Theory of Probability</td>
<td></td>
</tr>
<tr>
<td>BSE 5733</td>
<td>Principles of Mathematical Statistics I</td>
<td></td>
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</tbody>
</table>

Following the first year of doctoral coursework

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSE 5743</td>
<td>Principles of Mathematical Statistics II</td>
<td></td>
</tr>
<tr>
<td>BSE 6553</td>
<td>Linear Models</td>
<td></td>
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</tbody>
</table>

**Applied Biostatistics**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>BSE 5653</td>
<td>Non-Parametric Methods</td>
<td></td>
</tr>
<tr>
<td>BSE 6563</td>
<td>Longitudinal Data Analysis</td>
<td></td>
</tr>
<tr>
<td>BSE 6643</td>
<td>Survival Data Analysis</td>
<td></td>
</tr>
<tr>
<td>BSE 6663</td>
<td>Multivariate Biostatistics</td>
<td></td>
</tr>
</tbody>
</table>

3. Elective Courses: 3 credit hours minimum

The student must complete at least three additional credit hours of elective coursework in the department of biostatistics and epidemiology. This coursework must be approved in advance by the student’s advisory committee. The following courses do not satisfy the requirement: BSE 5980, 6950, or 6980.

4. Dissertation

The student must enroll for at least 20 credit hours in BSE 6980 Research for Doctoral Dissertation. No more than 25 credit hours in BSE 6980 may be applied toward the minimum 90 credit hours required for the degree.
5. Other Requirements

a. Students are required, prior to initiation of doctoral research, to complete training in Responsible Conduct of Research (RCR) and Protection of Human Research Subjects. The training includes completion of two sections of the CITI course (Protection of Human Research Subjects and Responsible Conduct of Research), attendance at the OUHSC IRB In-House Education Program, and successful completion of a one credit-hour course in RCR approved by the Department.

b. Students are required to attend the departmental and college seminars during the spring and fall semesters.

c. Students are required to enroll in a minimum of 6 credit hours during the spring and fall semesters.

d. Students are required to achieve a working knowledge of methods, programming, and applications of computers as used in biostatistics and epidemiology. This knowledge may be acquired by formal class work or by experience acquired either before entering or during the course of the program. Completing BSE 5013 with a passing grade constitutes the minimum level of knowledge associated with this requirement.

e. Students are required to achieve a general understanding of the biomedical sciences as they relate to human health and disease. This requirement may be satisfied in one or more areas. Any course work needed to satisfy this requirement may be taken at this or another institution, either before or after entering the program. One example of an applicable course is Principles of Pathobiology (PATH 6024).

f. Tools of research that increase research proficiency are required. Research tools include competence in the use of computerized databases, and in the oral and written presentation of research data. The faculty will validate students’ acquiring of tools of research as they assess students’ performance on (1) the written qualifying examination, (2) the general and oral examinations, and (3) the dissertation.

g. Students must pass a written qualifying examination at the end of the first year of doctoral coursework, which must include BSE 5703 and BSE 5733. The qualifying examination will consist of two parts, each roughly four credit hours long. One part will focus on knowledge of statistical theory and mathematical statistics, and the other will assess ability to process, analyze, and interpret data collected to answer a research question.

h. Students must pass a General Written and Oral Examination
i. Students must complete the defense of the dissertation within five years of the end of the semester within which the General Written and Oral examination was successfully completed. If the time expires before the dissertation is completed, the coursework must be revalidated by retaking and passing the General Written and Oral Examination.

*This degree program is subject to the policies and procedures printed in the University of Oklahoma College of Public Health Bulletin.*

9/30/2015