

# BIOSTATISTICS, PH.D.

## Degree Requirements (42 Post-Masters Hours)

### Coursework

Course	Title	Credits
PUBH 700	Perspectives in Public Health	3
<b>Total Credit Hours</b>		<b>3</b>

### Courses in Statistics (9 Hours)

Course	Title	Credits
STAT 712	Mathematical Statistics I	3
STAT 713	Mathematical Statistics II	3
STAT 714	Linear Statistical Models	3
<b>Total Credit Hours</b>		<b>9</b>

### Seminar and Practica (9 Hours)

Course	Title	Credits
BIOS 845	Doctoral Seminar (1 credit per semester for 3 semesters) <sup>1</sup>	3
BIOS 890	Independent Study (Teaching Practicum)	3
BIOS 890	Independent Study (Consulting Practicum)	3
<b>Total Credit Hours</b>		<b>9</b>

<sup>1</sup> One credit hour of EPID 845 may be substituted.

### Department Core (9 Hours)

Course	Title	Credits
Select 800-level Biostatistics		9
<b>Total Credit Hours</b>		<b>9</b>

### Electives (9 Hours)

#### Cognate (3 Hours)

Course	Title	Credits
Select three of the following:		
BIOS 758	Advanced Linear Models in Biostatistics	9
BIOS 759	Theory and Methods of Discrete Data Analysis	
BIOS 760	Biostatistical Methods in Clinical Trials	
BIOS 761	Survival Analysis	
BIOS 765	Research Design in the Biomedical Sciences	
BIOS 770	Applied Longitudinal Data Analysis	
BIOS 775	Biostatistical Aspects of Bioinformatics	
BIOS 780	Introduction to Quantile Regression	
BIOS 794	Selected Topics in Biostatistics	
BIOS 805	Categorical Data Analysis	
BIOS 811	Survival Analysis II	
BIOS 815	Generalized Linear Models	
BIOS 820	Bayesian Biostatistics and Computation	
BIOS 822	Statistical Methods in Spatial Epidemiology	
BIOS 825	Multivariate Biostatistics	
BIOS 890	Independent Study	

BIOS 894	Selected Topics in Biostatistics	9
<b>Total Credit Hours</b>		

### Dissertation (12 Hours)

Course	Title	Credits
BIOS 899	Dissertation Preparation	12
<b>Total Credit Hours</b>		<b>12</b>

Note: With the exception of Master's core courses (EPID 701, BIOS 701, BIOS 710, and BIOS 757, and their equivalents), up to 12 hours may be transferred from previous graduate coursework, with the approval of the student's advisor and the Graduate Director.

To fulfill the Graduate School's requirement that all doctoral programs have a minimum of 60 hours post-baccalaureate, an additional 9 hours must appear on the program of study. These may include the Master's core courses listed above.

The requirement to take PUBH 700 may be waived with Graduate Director approval if a student has taken a similar course during his/her master's degree program. If this requirement is waived, the student will be required to take 3 additional Biostatistics/Statistics credit hours to replace this course.

### Dissertation Requirements for the Ph.D.

#### Dissertation Proposal

All doctoral students must complete a research project culminating in a dissertation. The dissertation must be based on original research, typically addressing a basic research problem. The first step in that process is the development of the dissertation proposal, and its oral defense before the student's doctoral committee. The committee must approve the proposal in writing before the student can proceed with the research.

#### Ethics and Professional Standards

All dissertation research involving human subjects must be reviewed and approved by the appropriate ethics review committee. Research qualifying for exemption (typically secondary data analysis of existing data, observational studies with adults, or evaluation of service/public activities) can be approved by the University Institutional Review Board. The IRB application must be completed online at [http://www.orc.research.sc.edu/eIRB\\_migration\\_info.html](http://www.orc.research.sc.edu/eIRB_migration_info.html) ([https://sc.edu/about/offices\\_and\\_divisions/research\\_compliance/irb/](https://sc.edu/about/offices_and_divisions/research_compliance/irb/)). It will be necessary to register the first time you enter the site. Some projects must also be approved by the review committee at the agency where the dissertation research is conducted. Any necessary approvals must be obtained prior to beginning work on the defined research. Some dissertation activities related to an ongoing research project may be covered under that project's IRB approval; this should be discussed with the project PI and/or dissertation advisor; in most situations, notification of the IRB of a change in protocol is sufficient.

#### Deadlines

The dissertation must be read, critically evaluated, and approved by all members of the Dissertation Committee. In accordance with graduate School guidelines, the following deadlines must be met. The specific dates for a semester are available on the U.S.C. Graduate School home page <http://www.gradschool.sc.edu>.

1. The first complete draft of the dissertation must be in the hands of the Dissertation Committee at least 60 days before the end of the semester (Graduate Studies Bulletin); the approximate dates

are October 15, March 15, and June 15 for fall, spring and summer sessions respectively. This is approximately six weeks before the filing date for the dissertation, and should be at least one month before the scheduled defense. The dissertation defense should be scheduled at this time; the Graduate Director must approve the scheduled time (see guidelines for scheduling in section 4 below).

2. The final copy is to be submitted to each committee member at least 30 days prior to the end of the semester (Graduate Studies Bulletin) or at least one week prior to the dissertation defense, whichever is earlier.
3. The dissertation defense must be held at least one week before the Graduate School filing date, which is 20 days before the end of the semester.
4. The student must file the final dissertation, with the designated number of copies, by the filing date. The Graduate Director of the student's program, or the administrative assistant for education, will give preliminary approval to title page and general format. Final approval is given by the Graduate School when the thesis is filed at a scheduled appointment.

### **Dissertation Defense and Examination**

1. The candidate must publicly present the dissertation in a 45-60 minute presentation. Announcements of this presentation should be posted and sent to the EPID-BIOS listserv at least one week before the defense; at least one announcement must be posted on the seminar bulletin board outside the Department Office. The dissertation defense should be scheduled in an available classroom and not during the scheduled class time of any department core course. Department faculty are strongly encouraged to attend dissertation defenses.
2. . The dissertation defense should be scheduled in an available classroom and not during the scheduled class time of any department core course. Department faculty are strongly encouraged to attend dissertation defenses.
3. The candidate must pass an oral comprehensive examination that shall be administered immediately following the presentation and evaluated by his/her Dissertation Examination Committee. This examination will focus on the technical and scientific aspects and the scholarly delineation of the dissertation topic, and may cover any other subject matter relevant to the student's field of study.

### **Final Version and Copies**

All Dissertation Committee members must approve the final version of the dissertation and sign the title page before the student submits it to the Graduate School. The student should provide each Dissertation Committee member a copy of the dissertation as submitted to the Graduate School, bound in a manner acceptable to the committee. These copies are in addition to the minimum number required by the Graduate School and any personal copies. Students are responsible to make sure the dissertation meets the Graduate School requirements (see: <http://gradschool.sc.edu/thesisdissertation/dissertation.htm>).