

**Program Planner**  
**PhD Program - Dissertation Plan C**

This checklist is a planning tool. Please consult with your advisor to track academic progress. Students must maintain a minimum 3.0 GPA and enroll in at least 12 units per quarter.

**COURSE REQUIREMENTS - 58 UNITS**

**REQUIRED STATISTICS COURSES – 39 units**

Course	Title	Units	Term Taken
STA 231A	Mathematical Statistics	4 units	_____
STA 231B	Mathematical Statistics	4 units	_____
STA 231C	Mathematical Statistics	4 units	_____
STA 232A	Applied Statistics	4 units	_____
STA 232B	Applied Statistics	4 units	_____
STA 232C	Applied Statistics	4 units	_____
STA 243	Computational Statistics	4 units	_____
STA 290	Seminar in Statistics (6 quarters; 1 unit each)	6 units	_____
STA 260	Methods in Statistical Consulting	3 units	_____
STA 390	Methods in Teaching Statistics	2 units	_____
<b>TOTAL STAT UNITS:</b>			_____

*All coursework and the program of study must be approved by the Graduate Advisor.*

**BIOSTATISTICS CORE COURSES – 12 units**

Course	Title	Units	Term Taken
BST 222	Survival Analysis	4 units	_____
BST 223	Generalized Linear Models	4 units	_____
BST 224	Analysis of Longitudinal Data	4 units	_____
<b>TOTAL CORE UNITS:</b>			_____

**ELECTIVES – 7 units**

**Biostatistics or Methods Electives (4 units):**

BST 225	Clinical Trials	4 units	_____
BST 226	Statistical Methods for Bioinformatics	4 units	_____
BST 227	Machine Learning in Comp Bio & Genomics	4 units	_____
BST 252	Advanced Topics in Biostatistics	4 units	_____
STA 250*	Topics in Applied and Computational Statistics	4 units	_____
STA 251*	Topics in Statistical Methods and Models	4 units	_____
STA 235 A,B	Probability Theory	4 units	_____
STA 237 A,B	Time Series Analysis	4 units	_____

*\*The topics of these courses change each quarter and with each instructor.*

**Life Sciences Courses (3 units):**

One course at the upper division (100-level) or the graduate level (200-level) in Biology or Life sciences, approved by the graduate advisor.

**TOTAL ELECTIVE UNITS:** \_\_\_\_\_

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#### Practicum

Students will complete a practicum in the form of an interdisciplinary applied data analysis project. They will work in collaboration with any UC Davis faculty researcher (not required to be a member of the Graduate Group) who conducts studies or experiments that generate data in the medical, biological, veterinary medical, epidemiological, agricultural or environmental sciences, and who will serve as a research mentor. The practicum will last a minimum of six weeks sometime before completion of the dissertation and will involve the analysis of original data. The student will prepare or substantially contribute to a project report. The practicum may be conducted as part of employment as a Graduate Student Researcher or as part of the dissertation research.

#### Preliminary Written Examination

The Ph.D. Preliminary Written Examination will be given at fixed times, typically at the beginning of each Spring Quarter, with 2 months notification in advance before the written examination will be offered. The exam has two parts: a theory component based on STA 231A and STA 231B and a biostatistics component based on BST 222 and BST 223. The exam components may be taken at separate times. The duration of each part is about 3- 4 hours. Students in the Ph.D. program must take the theory component in the Spring Quarter immediately after they complete the STA 231A and STA 231B course series and the biostatistics component after they complete the BST222 and BST223 core course series. A well-prepared student will take this exam in the Spring Quarter during the first year of the program.

#### Ph.D. Qualifying Examination

The Ph.D. Qualifying Examination is an oral exam. The exam will be attempted as soon as the Ph.D. Preliminary Written Examination has been passed and all required coursework for the Ph.D. degree in Biostatistics has been completed. In accordance with university rules, students are requested to take their qualifying examination before the end of the third year to remain eligible for academic appointments such as TA. The preparation for the exam will be done by working closely with a faculty mentor (independent study). The Ph.D. Qualifying Examination covers a special research topic assigned by an examining committee consisting of five faculty members. A forty-five minute presentation given by the student is followed by a question period which covers the special research topic as well as coursework in general. The examining committee will be appointed by Graduate Council at the recommendation of the graduate adviser who consults with the student prior to making the recommendation. The major professor is not eligible to serve as chair of the examining committee.

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**Dissertation**

The *doctoral dissertation* is an essential part of this program. A topic will be selected by the student, under the advice and guidance of a major professor (thesis adviser) and a dissertation committee chaired by the major professor. Students are encouraged to begin some research activity as early as possible during the second year of their graduate studies. The dissertation must contain an original contribution of publishable quality to the knowledge of statistics that may expand the theory or methodology of statistics, or expand or modify statistical methods to solve a critical problem in applied disciplines.

**Final Examination**

The entire dissertation committee will conduct a final oral examination, which will deal primarily with questions arising out of the relationship of the dissertation to the field of Biostatistics. The final examination will be conducted in two parts. The first part consists of a one hour presentation by the candidate followed by a brief period of questions pertaining to the presentation; this part of the examination is open to the public. The second part of the examination will immediately follow the first part; this is a closed session between the student and the committee and will consist of a period of questioning by the committee members. Title and abstract of the oral presentation will be distributed to all faculty and students of GGB, who are invited to attend the presentation portion of the examination.

**Normative Time to Degree**

The Normative time to Degree is five to six years.