

June 5, 2018

**KYOUNGMI KIM, CHAIR**  
Biostatistics Graduate Group

**RE: Biostatistics Degree Requirements**

Enclosed is a copy of the Biostatistics graduate degree requirements as approved by Graduate Council on June 1, 2018. These degree requirements are now the official requirements for the Biostatistics Graduate Group and will be posted on the Office of Graduate Studies program webpage:

<https://grad.ucdavis.edu/programs/gbst>

Thank you for your efforts on behalf of graduate education.

Sincerely,

A handwritten signature in black ink, appearing to read "N. Baumgarth". The signature is fluid and cursive, with a large loop at the end.

Nicole Baumgarth, Chair  
Graduate Council

CC: Amanda Kimball, Graduate Studies Analyst  
Christeta Rillera, Graduate Group Coordinator  
Jillian Hancock, Graduate Group Coordinator

**BIOSTATISTICS GRADUATE GROUP PH.D. and M.S.  
DEGREE REQUIREMENTS**

*Revisions: 2000; June 5, 2005; May 25, 2006; April 24, 2009; May 10, 2017*

*Approved by GGB ballot: June 7, 2017 Approved by  
the Graduate Council: June 1, 2018*

**THE MASTER'S PROGRAM**

**1. Admissions Requirements**

An undergraduate major in mathematics or statistics is typical for Biostatistics graduate students, but is not required. However, because of the mathematical nature of some of the graduate coursework, students should be able to demonstrate good mathematical ability. Students should also demonstrate some exposure to courses in the life sciences (biological, environmental, medical and agricultural sciences). The minimal background for entrance into the master's program is: a bachelor's degree with a 3.0 overall grade- point average; one year of calculus; a course in linear algebra; familiarity with a programming language; and upper-division work in mathematics and/or statistics. Applicants without this minimal background will not be considered for admission in the Graduate Group. Applicants must complete the online Office of Graduate Studies application, and provide three letters of recommendation and GRE scores taken within the last 5 years; applicants whose native language or language of instruction is not English must achieve the minimum TOEFL or IELTS scores listed on the Office of Graduate Studies website. **The program does not accept part-time students.**

**2. Master's Plan**

This is a M.S. Plan II program which requires a comprehensive exam (no thesis required). A minimum of 49 units is required (graduate and upper division), of which at least 18 must be graduate courses in the major field (according to university regulations). Not more than 9 units of research (299 or equivalent) may be used to satisfy the 18-unit requirement. Students who are underprepared for the required curriculum may elect to take STA 131A, B, or C, STA 106, STA 108 or similar courses within the first academic year of the MS program and must achieve a grade of at least a B in each course, but these units will not count towards the degree. This Plan requires more units than the UC Davis minimum, which are: 36 units of graduate and upper division courses, of which at least 18 units must be graduate courses in the major field.

**3. Course Requirements (49 units)**

**A. Required courses (34 units):**

<b>Course</b>	<b>Units</b>	<b>Allowed Substitutes</b>
STA 200A (Introduction to Probability Theory)	4 units	STA 231A (Mathematical Statistics I)
STA 200B (Introduction to Mathematical Statistics I)	4 units	STA 231B (Mathematical Statistics II)

STA 200C (Introduction to Mathematical Statistics II)	4 units	
STA 206 (Statistical Methods for Research I)	4 units	STA 232A (Applied Statistics I)
STA 207 (Statistical Methods for Research II)	4 units	STA 232B (Applied Statistics II)
STA 135 (Multivariate Data Analysis)	4 units	STA 232C (Applied Statistics II)
STA 243 (Computational Statistics)	4 units	STA 141A (Fundamentals of Statistical Data Science)
BST 290 (Seminar in Biostatistics)	1 unit each, for three quarters	
STA 260 (Statistical Practice and Data Analysis)	3 units	Data Analysis Project under BST 299 (Individual Study)
Total Required Units	34 units	

Students desiring to replace a required course for the M.S. program with an allowed substitute (see Table above) must first get pre-approval by the Master Graduate Advisor. The substituting course cannot be used simultaneously to satisfy any of the other courses requirements.

**B. Biostatistics core courses (8 units). Two courses chosen from:**

- BST222 (Survival Analysis) (4 units)
- BST223 (Generalized Linear Models) (4 units)
- BST224 (Longitudinal Data Analysis) (4 units)
- BST225 (Clinical Trials) (4 units)
- BST226 (Statistical Methods in Bioinformatics) (4 units).

**C. Electives (7 units):**

**Biostatistics and Methods electives (4 units):**

One course with a substantial biostatistical data analysis component at the graduate level. Possible courses include the following (although they may not simultaneously satisfy any other Biostatistics core courses requirement):

- BST222 (4 units)
- BST223 (4 units)
- BST224 (4 units)
- BST225 (4 units)
- BST226 (4 units)
- BST227 (4 units)
- STA237A or STA237B (4 units each)
- STA250 (4 units)
- STA251 (4 units)
- STA252 (4 units)

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

One course selected from any upper division or graduate offering in biology; epidemiology; or the environmental, agricultural or medical sciences.

Further elective units at the upper division or graduate level, although not required,

may be taken in the following areas when a student wishes to do so to enhance their education and career preparation:

(a) Statistics, (b) Fields of Biostatistical application (e.g., epidemiology, genetics).

#### **D. Summary**

A minimum of 49 units is required; 42 units of core and 7 of elective coursework. A minimum course load is 12 units per academic quarter. Per UC regulations students cannot enroll in more than 12 units of graduate level courses or more than 16 units of combined undergraduate and graduate level courses per quarter.

#### **4. Special Requirements**

None.

#### **5. Committees**

- a. **Admissions Committee:** once applications and relevant materials are submitted to the program, they are reviewed by the Admissions Committee, which consists of three to five faculty members appointed by the Chair of the Graduate Group. Once a decision has been made to admit or deny an applicant, the Admissions Committee chair forwards the committee's recommendation to the Dean of Graduate Studies for approval. Notification of admissions decisions will be sent by Graduate Studies. The priority application and fellowships deadline for entry in Fall of the next academic year is January 15; applications are accepted through May 15.
- b. **Advising Committee:** Five faculty members are appointed by the Dean of Graduate Studies to the Committee of Advisers, chaired by the **Master Graduate Adviser**. The Master Graduate Adviser meets quarterly with each graduate student and assists graduate students in developing a study plan. In particular, the Master Graduate Adviser must approve all courses to be used to fulfill the requirements. Other members of the Committee of Advisers support the Master Graduate Adviser when needed. All students are expected to enroll in a minimum of 12 units per quarter, which may include a combination of required courses, electives, and research units (BST299).
- c. **Comprehensive Examination Committee:** The Graduate Group Chair will appoint two permanent members to the M.S. comprehensive exam committee for two year terms. The third member, who will be the chair, is identified by the Master Graduate Adviser in consultation with the student. This committee will be in charge of administering the M.S. comprehensive exam and reporting the result to the chair of the GGB. The chair of the committee is responsible for guiding the student in preparation for the comprehensive exam.

#### **6. Advising and Mentoring**

Five faculty members are appointed by the Dean of Graduate Studies to the Committee of

Advisers, chaired by the **Master Graduate Adviser**. The Master Graduate Adviser assists graduate students in developing a study plan, and has signatory authority for all paperwork to be submitted to the Office of Graduate Studies. Other members of the Committee of Advisers support the Master Graduate Adviser when needed. The **Mentoring Guidelines** may be found online (<http://biostat.ucdavis.edu/pages/program/mentoring%20guidelines.pdf>).

## **7. Advancement to Candidacy**

Plan II M.S. Candidates must file an advancement to candidacy form (<http://www.gradstudies.ucdavis.edu/forms>) prior to taking the M.S. comprehensive examination. Candidates must have taken at least half of the required coursework for their degree requirements (25 units) prior to advancing to candidacy. Students are expected to apply for advancement to candidacy by the end of the third quarter in the program, and then advance by the end of the 6<sup>th</sup> quarter. A completed form includes a list of courses the student will take to complete degree requirements. Students must have the Master Graduate Adviser sign the candidacy form before it can be submitted to Graduate Studies. If the candidacy is approved, the Office of Graduate Studies will send a copy to the program and the student. If the Office of Graduate Studies determines that a student is not eligible for advancement, the program and the student will be told the reasons for the application's deferral. Some reasons for deferring an application include: grade point average below 3.0, outstanding "I" grades in required courses, or insufficient units.

## **8. Comprehensive Exam**

Students in the M.S. program must attempt the comprehensive exam when nearly all coursework is complete, typically in the last quarter in the program. Every M.S. student needs to pass the comprehensive exam in a maximum of two attempts. If a student fails the first attempt, the second attempt must be made before the end of the next quarter; in particular, if the first attempt is made in Spring, the second attempt must be made over the summer. Failure to pass the comprehensive exam at the second attempt will result in a recommendation to the Dean of Graduate Studies for disqualification of the student from the graduate program.

The M.S. Comprehensive Examination consists of a written technical report and an oral defense on a scientific project involving the application of Biostatistical theory and methods. This project should be well written and should have the potential to be publishable in a scientific journal. The chair of the committee will provide the student with a scientific project involving real-life study design and/or data analysis. The student will have at most four weeks to complete the project and write the written technical report. The final written report should be submitted to the comprehensive exam committee at least one week prior to the pre-determined exam date. The exam committee will schedule an oral defense with the candidate in which the candidate presents the project and answers questions about the work. After this oral defense, the committee will make a decision on whether to pass the candidate. Each student will receive a written evaluation on the performance on the examination, which will be discussed with the Biostatistics Master Graduate Adviser.

As an alternative to satisfy the MS comprehensive examination requirement, students who pass

the PhD preliminary written examination (see the PhD degree requirements, section 8.a for details) at the masters level (a threshold set by the preliminary written examination committee) will meet this requirement. Any attempt to pass the PhD preliminary written examination by a MS student will be counted as a first attempt to pass the MS comprehensive exam at the MS level and also the PhD preliminary written examination at the PhD level. Failure at the PhD level counts as a failed first attempt of the PhD preliminary written examination, and failure at the MS level as a failed first attempt at the MS comprehensive exam. Any graduate student has at most two attempts at this exam, regardless of the program the student is enrolled in.

## 9. Normative Time to Degree

The Normative Time to Degree for the Biostatistics M.S. program is six quarters (two years), although well-prepared students with sufficient statistical/biostatistical background prior to enrollment in the Graduate Group may find it possible to finish the program in five quarters.

## 10. Typical Time Line and Sample Study Plans

Course requirements are completed by the end of year two, and the M.S. Comprehensive Examination may be attempted in the fifth or sixth quarter. Graduate Students must be enrolled in a minimum of 12 units every quarter. These 12 units can be made up of both required courses and 299 variable unit courses. In addition to the coursework outlined below, students will take BST 290 for any two quarters. The following would be a typical program for a student seeking an M.S. degree

### Year 1:

#### Fall

Statistics 200A  
 Statistics 206  
 Statistics 243

#### Winter

Statistics 200B  
 Statistics 207  
 Elective  
 Biostatistics 290

#### Spring

Statistics 200C  
 Statistics 135  
 Statistics 260  
 Biostatistics 290

### Year 2:

#### Fall

Biostatistics 222  
 Elective  
 Elective

#### Winter

Biostatistics 223  
 Elective  
 Elective  
 Biostatistics 290

#### Spring

*M.S. Comprehensive Exam*

## 11. Sources of Funding

Students may be supported by TA-ships and Graduate Student Researcher (GSR) positions. However, there is no promise for any support.

## 12. PELP, *In Absentia* & Filing Fee Status

Information about PELP (Planned Educational Leave, In Absentia (reduced fees when researching out of state), and Filing Fee status can be found in the Graduate Student Guide: <http://www.gradstudies.ucdavis.edu/publications>.

# THE PH.D. PROGRAM

## 1. Admission Requirements

An undergraduate major in mathematics or statistics is typical for Biostatistics graduate students, but is not required. However, because of the mathematical nature of some of the graduate coursework, students should be able to demonstrate good mathematical ability. Students should also demonstrate some exposure to courses in the life sciences (biological, environmental, medical and agricultural sciences).

The minimal background for entrance into the Ph.D. program is: a bachelor's degree with a 3.0 overall grade-point average; one year of calculus; a course in linear algebra; familiarity with a programming language; and upper-division work in mathematics and/or statistics. Applicants without this minimal background will not be considered for admission in the Graduate Group. Applicants must complete the online Office of Graduate Studies application, and provide three letters of recommendation and GRE scores taken within the last 5 years; applicants whose native language or language of instruction is not English must achieve the minimum TOEFL or IELTS scores listed on the Office of Graduate Studies website. **The program does not accept part-time students.**

### a) Prerequisites

In addition, applicants are expected to have the equivalent of the following UC

Davis courses:

MAT25 and MAT125A and MAT167

### b) Deficiencies

Course work deficiencies should be made up by the end of the first academic year following initial enrollment by earning a letter grade of “B” or better.

## 2. Dissertation Plan

This is a Plan C program which specifies a three member (minimum) dissertation/final examination committee, a final oral examination, and no exit seminar.

## 3. Course Requirements (58 units)

### A. Required Statistics course (39 units):

Required Statistics Course	Units	Allowed Substitutes
STA 231A (Mathematical Statistics I)	4 units	
STA 231B (Mathematical Statistics II)	4 units	
STA 231C (Mathematical Statistics III)	4 units	
STA 232A (Applied Statistics I)	4 units	



STA 232B (Applied Statistics II)	4 units	
STA 232C (Applied Statistics II)	4 units	
STA 243 (Computational Statistics)	4 units	STA 141A (Fundamentals of Statistical Data Sciences)
STA 260 (Statistical Practice and Data Analysis)	3 units	
BST 290 (Seminar in Biostatistics)	1 unit each, for six quarters	
STA 390 (Methods for Teaching Statistics)	2 units	
Total Required Units	39 units	

**B. Biostatistics Core Courses (12 units):**

- BST 222 (Survival Analysis) (4 units)
- BST 223 (Generalized Linear Models) (4 units)
- BST 224 (Analysis of Longitudinal Data) (4 units)

**C. Electives (7 units)**

**Biostatistics or Methods Electives (4 units):** One course chosen from:

- BST 225 (Clinical Trials)
- BST 226 (Statistical Methods for Bioinformatics)
- BST 227 (Machine Learning in Computational Biology and Genomics)
- BST 252 (Advanced Topics in Biostatistics)
- STA 250 (Topics in Applied and Computational Statistics)
- STA251 (Topics in Statistical Methods and Models)
- STA237 AB (Time series analysis)
- STA235 AB (Probability theory)

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

One course at the upper division or the graduate level in Biology or Life sciences. This course should be approved by the graduate advisor. The intention is to provide a base of knowledge in molecular, cellular, organismal, and population biology, epidemiology or environmental sciences. The students are strongly encouraged to take more courses in Biology, Life Sciences or Environmental Sciences that are relevant to their research. Selection of such courses should be made in consultation with the thesis adviser.

**D. Summary**

A minimum of 58 units is required; 51 units of core and 7 of elective coursework. All students are expected to enroll in a minimum of 12 units per academic quarter, which may include a combination of required courses, electives, and research units (BST299).

#### 4. Special Requirements

##### **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.

A report based on an internship of a duration of at least six weeks at a facility, government health office, institute or company outside of UC Davis focusing on biological or medical research can also be used to satisfy this requirement. In this case the research mentor will reside at the institution where the internship is carried out.

#### 5. Committees:

- a. **Admissions Committee:** once applications and relevant materials are submitted to the program they are reviewed by the Admissions Committee, which consists of three to five faculty members appointed by the Chair of the Graduate Group. Once a decision has been made to admit or deny an applicant, the Admissions Committee chair forwards the committee's recommendation to the Dean of Graduate Studies for approval. Notification of admissions will be sent by Graduate studies. The application and fellowships deadline is January 15 for admittance to the following fall quarter.
- b. **Advising Committee:** Four to five faculty members are appointed by the Dean of Graduate Studies to the Committee of Advisers, chaired by the **Master Graduate Adviser**. The Master Graduate Adviser meets quarterly with each graduate student and assists graduate students in developing a study plan. In particular, the Master Graduate Adviser must approve all courses to be used to fulfill the requirements. Other members of the Committee of Advisers support the Master Graduate Adviser when needed.
- c. **Qualifying Examination Committee:** the examining committee consists of five members, at least three but no more than four of whom are members of the GGB. Members will be appointed in accordance with the policies of the Graduate Council and Office of Graduate Studies at the recommendation of the Graduate Adviser who consults with the student prior to making the recommendation. The Major Professor (if already identified) is not eligible to serve on the QE committee. Conversely, faculty serving on the QE committee are ordinarily ineligible to serve as the Major Professor.
- d. **Dissertation Committee:** the student, in consultation with their Major Professor,

nominates three faculty to serve on the Dissertation Committee, one of whom is the Major Professor who serves as Chair of the committee. These nominations are submitted to the Office of Graduate Studies for formal appointment in accordance with Graduate Council Policy (DDB 80. Graduate Council B.1.).

## **6. Advising and Mentoring**

Four to five faculty members are appointed by the Chair of the Graduate Group to the Committee of Advisers, chaired by the **Master Graduate Adviser**. The Master Graduate Adviser assists graduate students in developing a study plan, and has signatory authority for all paperwork to be submitted to the Office of Graduate Studies. Other members of the Committee of Advisers support the Master Graduate Adviser when needed. A Ph.D. student will select an area of specialization and will choose a dissertation adviser (**Major Professor**) from the Graduate Group in Biostatistics faculty working in that area, usually in the second or third year of study after passing the Ph.D. preliminary written examination. The Master Graduate Advisor, in consultation with the Committee of Advisors, assists students with identifying a major professor and ensures that each student finds his/her major professor in the area of student's research interest. The Major Professor would be qualified to guide the student during the student's dissertation research in a specialized area of research. In addition, the Major Professor may serve as an informal advisor for the student in developing updated study plans deemed necessary for dissertation research. The **Mentoring Guidelines** may be found online (<http://biostat.ucdavis.edu/pages/program/mentoring%20guidelines.pdf>).

## **7. Advancement to Candidacy**

The student is eligible for advancement to Candidacy for the Ph.D. degree upon completion of all course requirements and after passing the Ph.D. Qualifying Examination, usually within two to three quarters of passing the Ph.D. Preliminary Written Examination. Well-prepared students with sufficient statistical/biostatistical background prior to enrollment in the Graduate Group are expected to advance to candidacy by the end of the six quarter in the program. Otherwise, students are expected to advance to candidacy by the end of the ninth quarter in the program. Students must file the appropriate paperwork with the Office of Graduate Studies and pay the candidacy fee in order to be officially promoted to Ph.D. Candidacy.

## **8. Qualifying Examination and Dissertation Requirements**

### **a) 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. Otherwise, they are expected to take the exam during the second year of the program in the Spring Quarter. If a student does not attempt the examination at the first time they are eligible to take the exam, it will be recorded as a failure. Every Ph.D. student needs to pass each part of the examination within a maximum of two attempts. In case of failure at the first attempt, the second attempt must take place at the next time the examination is offered (usually the retake is given in the Fall quarter of the third year), and if a student does not attempt the exam at that time, it will be counted as a second failure. Failure to pass the examination on the second attempt will result in a recommendation to the Dean of Graduate Studies for disqualification of the student from the Ph.D. program.

The Ph.D. Preliminary Written Examination committees in charge may be different for each part of the exam. Pass or fail is determined separately by the exam committees for the statistical theory part and the biostatistics part of the exam. The chair of the GGB will appoint an exam committee for two year terms that will be responsible for preparing, administering and grading the examination. This committee will make the final decision on each student and forward its recommendation to the chair of the GGB.

**b) Qualifying Exam**

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, within two quarters of passing the Ph.D. Preliminary Written Examination, but no later than the end of the third year (9<sup>th</sup> quarter) to remain eligible for academic appointments such as Graduate Student Researcher (GSR) or Teaching Assistant (TA). The Master Graduate Adviser must submit the Application for the Qualifying Exam four weeks to Graduate Studies prior to the exam date; exams taken before receiving Office of Graduate Studies approval, may be deemed null and void. Students must be registered during the quarters in which they take any portion of their Qualifying Examination. To be eligible for the Qualifying Examination, the student must have:

- A “B” average in all coursework done in graduate standing;
- Satisfied all departmental or group requirements; and
- Removed all academic deficiencies.

The preparation for the qualifying exam will be done by working closely with the major professor through BST 299 (independent study) who is a regular member of the

GGB. The exam committee consists of five faculty members, at least three but no more than four of whom are members of the GGB. The Major Professor is not eligible to serve on the Ph.D. Qualifying Examination committee. The Ph.D. Qualifying Examination examines a student on the breadth and depth of knowledge expected from the coursework taken, and a special research topic in Biostatistics specified by the major professor in consultation with the exam committee. The primary purpose of the QE is to validate that the student is academically qualified to conceptualize a research topic, undertake scholarly research and successfully produce the dissertation required for a doctoral degree. A forty-five minute presentation on the specified research topic for the dissertation given by the student is followed by the qualifying examination session of 2-3 hours long, which covers questions on the special research topic presented as well as coursework in general. The examining committee will be appointed by Graduate Council at the recommendation of the Master Graduate Adviser who consults with the student prior to making the recommendation.

Graduate Studies guidelines for Ph.D. Qualifying Examinations apply. A student who passes the Ph.D. Qualifying Examination is eligible for Advancement to Candidacy for the Ph.D. degree. Title and abstract of the Ph.D. Qualifying Examination presentation will be distributed to all faculty and students of the Graduate Group in Biostatistics, who are invited to attend the 45-minute presentation portion prior to the qualifying examination session. The subsequent qualifying examination portion is a closed session between the student and the committee only. The student must file the appropriate paperwork with the Office of Graduate Studies and pay the candidacy fee to be promoted to Candidacy for the Ph.D. degree.

**c) Qualifying Exam: Outcomes**

A committee, having reached a unanimous decision, shall inform the student of its decision as “Pass” (no conditions may be appended to this decision), “Not Pass” (the Chair’s report should specify whether the student is required to retake all or part of the exam, list any additional requirements, and state the exact timeline for completion of requirements to achieve a “Pass”). If a unanimous decision takes the form of “Not Pass” or “Fail”, the Chair of the QE committee must include in its report a specific statement, agreed by all members of the committee, explaining its decision and must inform the student of its decision. Having received a “Not Pass” the student may attempt the QE one additional time or fulfill the committee’s requirements for “Pass.” After a second exam, a vote of “Not Pass” is unacceptable; only “Pass” or “Fail” is recognized. Only one retake of the QE is allowed. A student who fails the QE on the second attempt will be recommended to the Dean of Graduate Studies for disqualification from the program.

**d) The Dissertation**

The doctoral dissertation is an essential part of the Ph.D. program. A topic will be

selected by the student, under the advice and guidance of a Major Professor (dissertation 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 Biostatistics that may expand the theory or methodology of Biostatistics, or expand or modify Biostatistical methods to solve a critical problem in applied disciplines. Acceptance of the dissertation by three designated members of the dissertation committee follows Graduate Studies guidelines (Plan C). The dissertation must be completed and submitted to the dissertation committee prior to taking the final examination described in Section 8 (e).

**e) 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.

**9. Normative Time to Degree**

The normative time to degree is five to six years.

**10. Typical Time Line and Sample Study Plans**

Every fulltime student at UC Davis is required to take 12 units of coursework per quarter. In addition to the coursework outlined below, students will take Biostatistics 290 and generally will take additional electives later on, in consultation with their Major Professor and/or the Master Graduate Advisor. The following track will be a typical program for a well-prepared student seeking a Ph.D. degree.

**Year 1:**

***Fall***

Statistics 231A  
232A  
Biostatistics 222  
Statistics 390

***Winter***

Statistics 231B  
Statistics 232B  
Biostatistics 223  
Biostatistics 290

***Spring***

Statistics 231C Statistics  
Statistics 232C  
Biostatistics 224  
Statistics 260  
Biostatistics 290  
*Ph.D. Preliminary Written Exam*

**Year 2:**

***Fall***

***Winter***

***Spring***

Statistics 243  
Elective  
Elective

BST 226  
Elective  
Elective  
Biostatistics 290  
*Ph.D. Qualifying Exam*

Dissertation Research

**Years 3-6:** Complete requirements for the Ph.D. degree, including Dissertation and Defense.

### **11. Sources of Funding**

The main sources of funding include TA-ships and Graduate Student Researcher (GSR) positions. Also students are strongly encouraged to apply for intramural or extramural fellowships.

### **12. PELP, *In Absentia* & Filing Fee Status**

Information about PELP (Planned Educational Leave, In Absentia (reduced fees when researching out of state), and Filing Fee status can be found in the Graduate Student Guide: <http://www.gradstudies.ucdavis.edu/publications>

### **13. Leaving the Program Prior to Completion of the Ph.D. Requirements**

Should a student leave the program prior to completing the requirements for the Ph.D., they may still be eligible to receive the Master's if they have fulfilled all the requirements (see Master's section). Students can use the Change of Degree Objective form available from the Registrar's Office:

<http://registrar.ucdavis.edu/PDFFiles/D065PetitionForChangeOfGraduateMajor.pdf>