

May 25, 2022

Jonathan Ducore
Chair, Epidemiology Graduate Group

RE: Epidemiology Graduate Group Degree Requirements

Enclosed is a copy of the Epidemiology Graduate Group degree requirements as approved by Graduate Council on May 23, 2022. These degree requirements are now the revised, official document for the Epidemiology Graduate Group and will be posted to the Office of Graduate Studies program webpage:

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

Thank you for your efforts on behalf of graduate education.

Sincerely,

A handwritten signature in green ink, appearing to read 'Dean Tantillo', with a stylized flourish at the end.

Dean Tantillo
Chair, Graduate Council Committee

c: Jasmine Bonite, Director of Policy and Programs, Graduate Studies
Duncan Temple Lang, Associate Dean for Graduate Programs, Graduate Studies
Felicia Murdoch, Policy Analyst, Davis Division of the Academic Senate
Christi Boyter, Coordinator, Epidemiology Graduate Group

GRADUATE GROUP IN EPIDEMIOLOGY
M.S. PLANS I AND II AND Ph.D. PLAN B DEGREE REQUIREMENTS
Previously Approved: June 9, 2005; June 28, 2013; March 19, 2021
Graduate Council Approval: May 23, 2022

The Graduate Group in Epidemiology has both M.S. and Ph.D. tracks. Students who intend to complete a Ph.D. in epidemiology should apply directly for the Ph.D. track (consult the Ph.D. Degree Requirements below). Students who do not intend to complete a Ph.D. in epidemiology may apply for admission to the M.S. track and later petition for admission to the Ph.D. track. Students whose petitions are successful will be required to satisfy all the requirements for the Ph.D. beyond those required in the M.S. track. Deadlines for such students will be the same as they would have been if students had been admitted directly into the Ph.D. track.

Master's Degree Requirements

1) Admissions Requirements: Admission to the M.S. Program requires a bachelor's degree, a completed online application, three letters of recommendation, official transcripts, and TOEFL scores submitted to Graduate Studies. A minimum GPA of 3.25 is required. Admissions decisions are made on a case-by-case basis. Meeting some or all of these criteria does not guarantee admission, but merely eligibility. The decision to recommend admission to the Dean of Graduate Studies rests with the Graduate Group in Epidemiology (GGE) Admissions and Awards Committee on the basis of available space and the competitiveness of applicants compared to the eligible pool.

- a) **Prerequisites:** In addition to the admissions requirements stated above, applicants expected to have the equivalent of the following UC Davis courses:
MAT16A and B: Short Calculus, 3 units each, **or**
MAT21A and B: Calculus, 4 units each
and either
STA102: Introduction to Probability Modeling and Statistical Inference, 4 units;
STA106: Applied Statistical Methods: Analysis of Variance/ANOVA, 4 units;
STA108: Applied Statistical Methods: Regression Analysis. 4 units
- b) **Deficiencies:** Course work deficiencies must be made up by the end of the first academic year following initial enrollment by earning a grade of "B" or better.

2. Plans I and Plan II:

Plan I: At UC Davis this plan requires a minimum of 30 units of graduate and upper division courses (the 100 and 200 series only) and, in addition, a thesis or a project in lieu of a thesis. At least 12 of the 30 units must be graduate work in the major field.

Plan II. At UC Davis this plan requires a minimum of 36 units of graduate and upper division courses, of which at least 18 units must be graduate courses in the major field. No more than 9 units of research (299 or equivalent) may be used to satisfy the 18-unit requirement. A comprehensive final examination in the major subject is required of each candidate. No thesis is required.

The requirements for the M.S. in Epidemiology exceed these minimums as follows:

- a) **Plan I. In addition to** the 30 units required by the Davis campus, this plan requires a minimum additional 11 units of graduate and upper division courses (100 and 200 series only) and, in addition, a thesis. Thus Plan I requires a minimum of 41 units plus the thesis.
- b) **Plan II.** Added to the 36 units required by the campus, this plan requires a minimum additional 8 units of graduate and upper division courses (100 and 200 series only) and, in addition, a comprehensive final examination. Thus Plan II requires a minimum of 44 units plus the comprehensive examination.

3. Course Requirements: Core, Elective and Seminar (minimum 41-44 units¹)

a) Core Courses (minimum 31 units)

EPI202: Probability Foundation of Statistical Models, Methods, and Data Analysis for Scientists, 5 units

EPI203: Foundation of Statistical Models, Methods, and Data Analysis for Scientists, 4 units

EPI204: Statistical Models, Methods, and Data Analysis for Scientists, 4 units

EPI205: Principles of Epidemiology, 4 units

EPI206: Epidemiologic Study Design, 4 units

EPI207: Advanced Epidemiologic Methodology, 4 units

EPI208: Analysis and Interpretation of Epidemiologic Data, 3 units²

b) Elective Courses (9-12 units)

Electives should be selected based on the student's chosen Area of Emphasis (nine units) plus, for Plan II students, three additional units from among graduate courses in epidemiology and statistics. Areas of Emphasis and courses that may be taken to satisfy the requirements for them can be found in the Guidelines and Supplemental Information for GGE Students at <https://www.epi.ucdavis.edu/>. In addition, other courses may be approved by a student's Graduate Advisor in consultation with the student's Guidance Committee and the GGE Educational Policy Committee.

¹Minimum units required depend on whether Plan I or Plan II is taken.

²PHR266, Applied Analytic Epidemiology (3 units) may be substituted for this course.

- c) **Seminars in Epidemiology (minimum 1 unit):** A seminar is offered every other week each quarter (0.5 units per quarter). Students are required to enroll in the seminar until advancement to candidacy (usually two quarters, when half of the coursework has been completed).
 - d) **Summary:** 41-44 units of core coursework are required including 9-12 units of electives and a minimum 1 unit of the epidemiology seminar. Full-time students must enroll for 12 units per quarter including academic, research and seminar units. Courses that fulfill any of the program course requirements may not be taken S/U unless the course is normally graded S/U. After course requirements are completed, students may take additional classes as needed, although 12 units per quarter are often fulfilled by enrollment in directed research (EPI299). All required courses are taught at the (200) graduate level. Elective courses may be taken at the 100 or 200 level.
- 4) **Special Requirements:** Students must maintain a GPA of 3.0 in all courses taken for a letter grade; failure to do so will result in deferral of advancement to candidacy and completion of degree requirements.
- 5) **Committees:** Program committees involved in the M.S. program are the Admissions and Awards Committee, Educational Policy Committee, Graduate Advisors Committee, and each student's Guidance and Thesis (Plan I) or Comprehensive Examination (Plan II) Committee.
- a) **Admissions and Awards Committee:** When the completed online application, all supporting material, and the application fee have been received, the application will be submitted to the Admissions and Awards Committee. The Committee consists of a minimum of five GGE faculty including a non-voting, ex-officio Graduate Advisor and a non-voting student representative. The Committee will have a minimum two members each from the Schools of Medicine and Veterinary Medicine. Based on a review of the entire application, the Committee may recommend or decline admission. Their decision is then forwarded to the Dean of Graduate Studies for final approval. Application deadlines are January 15 for applicants seeking fellowship support and February 15 for all others. No applications will be accepted after May 31.
 - b) **Curriculum and Educational Policy Committee:** The Curriculum and Educational Policy Committee concerns itself with all aspects of the program's curriculum including required and elective courses, areas of emphasis, and thesis or comprehensive examination. The Committee consists of a minimum of ten faculty of whom six are instructors of record (IORs) for GGE core courses, two non-IORs, a non-voting ex-officio Graduate Advisor, and a non-voting student representative.
 - c) **Graduate Advisors Committee:** This committee consists of three or more faculty, with at least one each from the Schools of Medicine and Veterinary Medicine. Each student is

assigned a Graduate Advisor upon entry to the program based on his/her primary interest (human focus, veterinary focus; in rare cases other foci may be permitted). Refer to section 6 below regarding the function of the Graduate Advisor.

- d) **Guidance Committee.** Each student, in consultation with the Graduate Advisor, will form a Guidance Committee composed of three faculty members, at least two of whom, including its Chair, must be members of the GGE. The Chair of the Committee will ordinarily be someone whom the student designates as a possible future Major Professor (someone who could guide his/her research). If the student cannot propose a Major Professor or is electing Plan II, a GGE faculty member whose interests mesh with those of the student will be identified and, if willing to serve, will be chosen by the student and Graduate Advisor. See section 6 below regarding the function of the Guidance Committee.
- e) **Thesis Committee (Plan I):** The student, in consultation with his/her Major Professor and Graduate Advisor, nominates two faculty in addition to the Major Professor to serve on the Thesis Committee. The nominations are submitted to Graduate Studies for formal appointment in accordance with Graduate Council policy. The Major Professor serves as Chair of the Committee.
- f) **Comprehensive Examination Committee (Plan II students):** Students in Plan II are required to complete a comprehensive oral examination administered by this Committee. The examiners will be nominated by the Graduate Advisor, in consultation with the student. The student's Guidance Committee often serves as the Comprehensive Examination Committee, although this is not required.

6. Advising Structure and Mentoring: Each Graduate Advisor, who is appointed by Graduate Studies, is a resource for information on academic requirements, policies and procedures and registration information, especially until the student's Guidance Committee is formed. Graduate Council policy requires the Graduate Advisor to meet with the student at least once a year and file an evaluation of his/her academic progress. The Guidance Committee, particularly its Chair, provides advice to the student concerning the choice of elective courses including the Area of Emphasis and potential research topics. The program's Mentoring Guidelines can be found in the Guidelines and Supplemental Information for GGE Students at www.epi.ucdavis.edu.

7. Advancement to Candidacy: Every student must file a Candidacy for the Degree of Master of Science form after completing one-half of the course requirements and at least one quarter before completing all degree requirements, typically the third quarter of the student's enrollment. The Candidacy for the Degree of Master of Science form can be found online at <http://www.gradstudies.ucdavis.edu/forms/requirements>. A completed form includes a list of courses the student has taken or will take to complete degree requirements. If changes must be made to the student's course plan after s/he has advanced to candidacy, the Graduate Advisor must recommend these changes to Graduate Studies. Students must have their Graduate Advisor sign the candidacy form before it can be submitted. For Plan I, the student's

Committee Chair must also sign the form. If advancement to candidacy is approved, Graduate Studies will send a copy to the GGE Program Coordinator, the student and the Major Professor. If Graduate Studies determines that the student is not eligible for advancement, the department and the student will be told the reasons for the application's deferral. Reasons for deferring an application include: grade point average below 3.0, outstanding "I" grades in required courses, or insufficient units.

8. Thesis and Comprehensive Examination Requirements:

a) Thesis Requirements (Plan I):

For students in this plan, a research topic must be approved by the student's Guidance Committee prior to commencing research, usually by the third quarter of the student's enrollment. After the Guidance Committee has approved the topic, a Thesis Committee with three members will be nominated by the Graduate Advisor in consultation with the student and submitted to Graduate Studies for formal appointment in accordance with Graduate Council policy. The topic should be acceptable to all three members of the Committee when they agree to serve, and a joint meeting of the Committee members and the student should be held at that time. If course prerequisites have been satisfied prior to admission, the thesis will typically be completed by the fourth to sixth quarter of the student's enrollment. The Committee Chair ordinarily will meet with the student each quarter to discuss progress and any change in research objectives. Research for the thesis must be carried out while the student is enrolled in the program. The thesis must be an original contribution to knowledge and demonstrate creative and independent work. All aspects of the thesis must be defensible and demonstrate the student's knowledge of relevant literature and research methods. The thesis should be submitted to the thesis committee at least one month before the student plans to make revisions. The thesis must be presented in a seminar open to the public. All committee members must approve the thesis and sign the title page before the thesis is submitted to Graduate Studies for final approval. Should the committee determine that the thesis is unacceptable, even with substantial revisions, the program will recommend the student for disqualification from the program to the Dean of Graduate Studies. The thesis must be filed in a quarter in which the student is registered or on Filing Fee status. Instructions on preparation of the thesis and a schedule of dates for filing the thesis in final form are available from Graduate Studies; the dates are also printed in the UC Davis General Catalog and in the Class Schedule and Registration Guide each quarter.

b) Comprehensive Examination Requirements (Plan II):

Fulfillment of the Comprehensive Examination is the last requirement of Plan II and is taken when the student has been advanced to candidacy. However, as the examination is a capstone requirement it is important that it be completed at or near the end of the coursework for the Master's degree; for most students the examination is taken in the student's fourth to sixth quarter of enrollment. The comprehensive examination is both written and oral and is administered by a committee of at least three members nominated by the Graduate Advisor, in consultation with the student. The examination is designed to assess the

student's mastery and working knowledge of subjects presented in the required courses. The faculty members will assign the student a project based on an epidemiologic hypothesis related to the student's interests. The student will be required to develop a study proposal of no more than 15 pages that includes a literature review, epidemiologic study design, sample size or power analysis, statistical approach to data analysis, and a discussion of the relative strengths and weaknesses of the proposal. The student must submit to the committee the assigned project no more than 15 calendar days following its assignment. The student then will be required to orally present and defend this proposal to the committee and be examined on its content and implications for the field. The Committee's unanimous vote is required to pass a student on the examination. If a student does not pass the examination, s/he may be reexamined one more time, but only if the Graduate Advisor concurs. The examination may not be repeated more than once. Failure to pass the examination the second time will result in a recommendation to the Dean of Graduate Studies to disqualify the student from the program. Students must be registered or on Filing Fee status when they take the exam with the exception of the summer period between the end of the Spring Quarter and the beginning of the Fall Quarter. Once the examination is passed, the Master's Degree Report Form is signed by the Graduate Advisor and is forwarded to Graduate Studies. The deadlines for submitting the form are listed each quarter in the campus General Catalog (available online at the website of the Office of the Registrar or from the Bookstore). The program must file the report with Graduate Studies within one week of the end of the quarter in which the student's degree will be conferred.

- 9. Normative Time to Degree:** Normative Time is the time that students are expected to take to complete all requirements for a degree assuming that they are engaged in full-time studies. Normative Time for this program is three to six quarters depending on whether prerequisite courses were completed prior to entering the program and whether the student chooses the Thesis or Comprehensive Examination option.

10. Typical Time Line and Sequence of Events:

a) For Students Who Have Not Completed Prerequisites (Sample):

	Summer	Fall	Winter	Spring
Year 1 Prerequisites:	MAT16A or MAT21A	EPI205 EPI290 MAT16B or MAT21B STA102	EPI206 EPI290 Elective(s) STA106	EPI207 EPI290 Elective(s) STA108
Year 2		EPI202 EPI290 STA144 ³ Elective(s)	EPI203 EPI290 Elective(s)	EPI204 EPI290 PHR266 ⁴ Elective(s)
Year 3	Thesis Research or Comprehensive Examination	EPI208 ⁴ Thesis Research or Comprehensive Examination	Thesis Research	Thesis Research

b) For Students Who Have Completed Prerequisites (Sample):

Year 1		EPI202 EPI205 EPI290 STA144 ³ Elective(s)	EPI203 EPI206 EPI290 Elective(s)	EPI204 EPI207 EPI290 PHR266 ⁴
Year 2	Thesis Research or Comprehensive Examination	EPI208 ⁴ Thesis Research or Comprehensive Examination	Thesis Research	Thesis Research

⁴Either PHR266 or EPI208 must be taken.

11. **Sources of Funding:** Students typically are self-funded or work as Graduate Student Researchers eligible for tuition remission when employed at 25% or greater percent effort.
12. **PELP, In Absentia and Filing Fee status:** Information about PELP (Planned Educational Leave Program), In Absentia (reduced fees when working out of state), and Filing Fee status can be found in the Graduate Student Guide at <http://www.gradstudies.ucdavis.edu/publications/>.

Ph.D. Degree Requirements

- 1) **Admissions Requirements:** Admission to the M.S. Program requires a bachelor's degree, a completed online application, three letters of recommendation, official transcripts, and TOEFL scores submitted to Graduate Studies. A minimum GPA of 3.25 is required. Admissions decisions are made on a case-by-case basis. Meeting some or all of these criteria does not guarantee admission, but merely eligibility. The decision to recommend admission to the Dean of Graduate Studies rests with the GGE Admissions and Awards Committee on the basis of available space and the competitiveness of applicants compared to the eligible pool.
 - a) **Prerequisites:** In addition to the admissions requirements stated above, applicants expected to have the equivalent of the following UC Davis courses:
MAT16A and B: Short Calculus, 3 units each, **or**
MAT21A and B: Calculus, 4 units each
and either
STA102: Introduction to Probability Modeling and Statistical Inference, 4 units;
STA106: Applied Statistical Methods: Analysis of Variance/ANOVA, 4 units;
STA108: Applied Statistical Methods: Regression Analysis. 4 units
or
 - b) **Deficiencies:** Course work deficiencies should be made up by the end of the first academic year following initial enrollment by earning a grade of "B" or better.
- 2) **Dissertation Plan B:** At UC Davis, this plan specifies a minimum three-member dissertation committee, an optional final oral examination (made on an individual student basis by the dissertation committee), and an optional exit seminar. The Graduate Group in Epidemiology goes beyond the campus requirement in requiring both the final oral examination and the exit seminar.
- 3) **Course Requirements, Core and Elective (minimum 45 units)**
 - a) **Core Courses (minimum 31 units)**
EPI202: Probability Foundation of Statistical Models, Methods, and Data Analysis for Scientists, 5 units
EPI203: Foundation of Statistical Models, Methods, and Data Analysis for Scientists, 4 units
EPI204: Statistical Models, Methods, and Data Analysis for Scientists, 4 units
EPI205: Principles of Epidemiology, 4 units
EPI206: Epidemiologic Study Design, 4 units
EPI207: Advanced Epidemiologic Methodology, 4 units
EPI208: Analysis and Interpretation of Epidemiologic Data, 3 units
 - b) **Elective Courses (12 units)**
Electives should be selected based on the student's chosen Area of Emphasis (nine units) plus three additional units from among graduate courses in epidemiology and statistics. Areas of Emphasis and courses that may be taken to satisfy them can be found in the

Guidelines and Supplemental Information for GGE Students at www.epi.ucdavis.edu. In addition, other courses may be approved by a student's Graduate Advisor in consultation with the student's Guidance Committee and the GGE Educational Policy Committee.

- c) **Seminars in Epidemiology (minimum 2 units):** A seminar is offered every other week each quarter (0.5 units per quarter). Students are required to enroll in the seminar until advancement to candidacy (usually four quarters).
 - d) **Summary:** A minimum 45 units of core coursework are required including 12 units of electives and a minimum 2 units of the epidemiology seminar. Full-time students must enroll for 12 units per quarter including academic, research and seminar units. Courses that fulfill any of the program course requirements may not be taken S/U unless the course is normally graded S/U. After course requirements are completed, students may take additional classes as needed, although 12 units per quarter are often fulfilled by enrollment in directed research (EPI299). All required courses are taught at the (200) graduate level. Elective courses may be taken at the 100 or 200 level.
- 4) **Special Requirements:** Students must maintain a GPA of 3.3 in all courses taken for a letter grade; failure to do will result in deferral of advancement to candidacy and failure to complete degree requirements. While there are no other special requirements, students are strongly urged to gain teaching experience before graduation. They should also be aware of the nine-quarter rule regarding employment (Directive 92-122 from Graduate Studies, July 21, 1992) that graduate students cannot hold an academic title (e.g., Teaching Assistant, Research Assistant, Associate Instructor) for more than nine quarters before passing their Qualifying Examination).
 - 5) **Committees:** Program committees involved in the Ph.D. program are the Admissions and Awards Committee, Educational Policy Committee, Graduate Advisors Committee, and each student's Guidance, Pre-Qualifying Written Examination, Qualifying Oral Examination and Dissertation Committees.
 - a) **Admissions and Awards Committee:** Once the completed online application, all supporting material, and the application fee have been received, the application will be submitted to the Admissions and Awards Committee. The Committee consists of a minimum of five GGE faculty including a non-voting, ex-officio Graduate Advisor and a non-voting student representative. The Committee will have a minimum of two members each from the Schools of Medicine and Veterinary Medicine. Based on a review of the entire application, the Committee may recommend or decline admission. The Committee's decision is then forwarded to the Dean of Graduate Studies for final approval. Application deadlines are January 15 for applicants seeking fellowship support and February 15 for all others. No applications will be accepted after May 31.
 - b) **Curriculum and Educational Policy Committee:** The Curriculum and Educational Policy Committee concerns itself with all aspects of the program's curriculum including required and elective courses, areas of emphasis, pre-qualifying written and qualifying oral examination and dissertation. The Committee consists of a minimum of ten faculty of whom six are instructors of record (IORs) for GGE core courses, two non-IORs, a non-voting ex-officio Graduate Advisor, and a non-voting student representative.

- c) **Graduate Advisors Committee:** This committee consists of three or more faculty, with at least one each from the Schools of Medicine and Veterinary Medicine. Each student is assigned a Graduate Advisor upon entry to the program based on his/her primary interest (human focus, veterinary focus; in rare cases other foci may be permitted). Refer to section 6 below regarding the function of the Graduate Advisor.
 - d) **Guidance Mentor.** Each student, in consultation with the Graduate Advisor, will identify a faculty mentor who may or may not become their major professor. The faculty mentor should be someone in the student's area of interest and will assist with elective course selection and in identification of a Major Professor with funding and a project that may develop into the student's dissertation.
 - e) **Qualifying Oral Examination Committee:** The Graduate Advisor, in consultation with the student, nominates five faculty to serve on the Qualifying Oral Examination Committee to examine the student on basic and advanced epidemiology, statistics, the student's Area of Emphasis and a special topic directly related to the proposed dissertation research. Nominations to the Committee are submitted to the Office of Graduate Studies for formal appointment in accordance with Graduate Council policy. The Major Professor does not serve on the Committee, as Chair or otherwise. The Committee conducts the examination and submits its results to Graduate Studies.
 - f) **Dissertation Committee:** The Dissertation Committee is a three-member committee, selected by the student in consultation with the Major Professor and the Graduate Advisor. Two of the three members should be members of GGE, including its Chair, who is the student's Major Professor. Committee membership is specified on the Advancement to Candidacy form. The Dissertation Committee advises the doctoral student on dissertation research topics and methods and reviews and approves the completed dissertation. The student is expected to meet regularly with the Committee chair. Committee members are expected to read and comment on the dissertation within four weeks of its submission (this limit does not apply to the summer for faculty holding nine-month appointments).
- 6. Advising Structure and Mentoring:** Each Graduate Advisor, who is appointed by Graduate Studies, is a resource for information on academic requirements, policies and procedures and registration information, especially until the student's Guidance Committee is formed. Graduate Council policy requires the Graduate Advisor to meet with the student at least once a year and file a written evaluation of his/her academic progress. The Guidance Committee Chair, particularly its Chair (usually the Major Professor), provides advice to the student concerning the choice of elective courses including those chosen for the Area of Emphasis and potential research topics. The Dissertation Committee, particularly its Chair, who is also the Major Professor, advises the student during all phases of the dissertation research, helping the student to formulate research questions, devise appropriate research methods, interpret findings and write up results. The program's Mentoring Guidelines can be found in the Guidelines and Supplemental Information for GGE Students at www.epi.ucdavis.edu.
- 7. Advancement to Candidacy:** Before advancing to candidacy, a student must have satisfied all requirements set by the program, must have maintained a minimum GPA of 3.3, and must have

passed a Qualifying Oral Examination. Advancement to candidacy ordinarily occurs by the ninth quarter of the student's enrollment. The student must pass the Qualifying Examination by then to remain eligible for academic appointments such as Teaching Assistant, Graduate Student Researcher, and Associate Instructor. The student must file the appropriate paperwork with Graduate Studies and pay the candidacy fee in order to be officially promoted to candidacy. If Graduate Studies determines that the student is not eligible for advancement, the department and the student will be told the reasons for the application's deferral. Some reasons for deferring an application include: grade point average below 3.3, outstanding "I" grades in required courses, or insufficient units.

8. Pre-Qualifying and Qualifying Examinations and Dissertation Requirements:

- a) **Pre-Qualifying Written Examination:** To take the Examination, a student ordinarily will have completed all required courses except EPI208. The Examination is designed to assess the student's mastery and working knowledge of subjects presented in the required courses as well as his/her ability to evaluate methods, analyze data, and logically interpret data. The Examination consists of three sections: basic epidemiology, advanced epidemiology and statistics (which includes both basic and advanced statistics) and takes place during two four-hour sessions over two days a week or two before the Fall Quarter. The student must receive a Pass on all parts of the Pre-Qualifying Examination before taking the Qualifying Oral Examination. If a student does not pass one or more of the sections, s/he may retake them, ordinarily within two quarters. A student who receives a Fail on the retake examination will be dropped from the program.
- b) **Qualifying Oral Examination:** A student must pass the Pre-Qualifying Written Examination before taking the Qualifying Oral Examination. S/he must also have presented a seminar open to GGE faculty and students describing the proposed dissertation research. All Qualifying Examination Committee members must attend the seminar, which should outline research hypotheses, design, methods and anticipated results and be based on a written research proposal circulated to the Committee at least two weeks in advance. Passing the Qualifying Oral Examination makes the student eligible for advancement to candidacy and is ordinarily taken by the ninth quarter of the student's enrollment. The purpose of the Examination is to assess whether the student is capable of critical and independent thinking related to epidemiology, statistics, his/her Area of Emphasis and selected topic and to assess whether the student is qualified to proceed with his/her dissertation research. The Qualifying Examination differs from the Pre-Qualifying Examination in its evaluation of the student's ability to synthesize concepts, formulate approaches, and solve problems, and in the breadth and depth of its examination of the student's knowledge partly but not exclusively as it relates to the proposed dissertation research. The Qualifying Examination will be approximately three hours in length and will assess the student's overall competence based on his/her academic record, performance on specific parts of the examination, and potential for scholarly research. Having reached a unanimous decision on the student's performance, the Committee shall inform the student immediately following the Examination of its decision to Pass, Not Pass, or Fail. No conditions may be appended to the decision to Pass. If a unanimous decision takes the form of Not Pass or Fail, the Chair to the Committee must include in its report a specific statement, agreed to 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 Examination once more; the

examination report must list the specific conditions and timing for the second exam. After a second examination, a vote of Not Pass is unacceptable; only Pass and Fail are permitted. Only one retake of the examination is allowed. Should the student receive a Fail on the first or second exam attempt at the examination, the student will be recommended for disqualification from the program.

- c) **The Dissertation and Exit/Defense Seminars:** The dissertation must be an original contribution to knowledge in epidemiology and demonstrate creative and independent work that is publishable in a peer-reviewed journal. All aspects of the dissertation must be defensible, including hypotheses, data quality, methods, results and interpretation. The student must participate sufficiently in the study design, sampling, biologic tests or assays and data collection to demonstrate knowledge of research methods, errors and biases. In addition, the work must primarily be that of the student and the student should be the primary author of all chapters or manuscripts included in the dissertation. Use of established statistical methods on an existing database is not acceptable, although development of new statistical or analytic methods with such a database is acceptable. The dissertation must be tied together by a unifying theme. The format of the dissertation typically will include an introduction, critical review of the literature, at least three chapters, each representing a publishable paper in a journal-ready format and a summary. A monograph format may be used if deemed appropriate by the Dissertation Committee. The next to last draft of the dissertation must be submitted to each member of the committee at least one month before the student expects to make revisions; committee members are expected to respond within four weeks, not including summer months for faculty with nine-month appointments. The cover page of dissertation must be approved and signed by the committee before it is submitted to Graduate Studies for final approval. The dissertation follows Plan B with a required Exit Seminar. Satisfaction of this requirement must be verified by the Dissertation Committee chair. The Exit Seminar is a formal public presentation of the student's research before the faculty and students. The seminar is expected to be a well-organized and succinct presentation of the research. The seminar is to be announced to the group in writing with a brief abstract. The Dissertation Committee will not sign the Dissertation until the seminar has taken place. A Defense Seminar, in lieu of the required Exit Seminar may be required at the discretion of the Dissertation Committee if no papers have been published or accepted for publication and the dissertation is not in the form of manuscripts for publication. The student must be notified by the Committee well in advance of the Exit Seminar if a defense is required. Filing of a Ph.D. dissertation with Graduate Studies is normally the last requirement the candidate satisfies. The deadlines for completing this requirement are listed each quarter in the campus General Catalog (available online at the web site of the Office of the Registrar or from the Bookstore). A candidate must be a registered student or in Filing Fee status when the dissertation is file except during the summer between the end of the Spring Quarter and before the beginning of the Fall Quarter. The dissertation will be prepared, submitted and filed according to Graduate Studies regulations(<http://gradstudies.ucdavis.edu/students/filing.html>).

9. **Normative Time to Degree:** Normative Time is the time that students are expected to take in order to complete all requirements for a degree assuming that they are engaged in full-time studies. Normative Time for this program is five years if prerequisite courses were completed prior to entering the program, two years of which is usually needed for advancement to candidacy and up to three year for completion of the Dissertation.

10. Typical Time Line and Sequence of Events:

a) For Students Who Have Not Completed Prerequisites (Sample):

	Summer	Fall	Winter	Spring
Year 1 Prerequisites:	MAT16A or MAT21A	EPI205 EPI290 MAT16B or MAT21B STA102	EPI206 EPI290 Elective(s) STA106	EPI207 EPI290 Elective(s) STA108
Year 2		EPI202 EPI290 STA144 ⁵ Elective(s)	EPI203 EPI290 PHR266 ⁵ Elective(s)	EPI204 EPI290 Elective(s)
Year 3	Pre-Qualifying Examination	EPI208 Elective(s)	Qualifying Examination	Dissertation Research
Years 4-6	Dissertation Research	Dissertation Research	Dissertation Research	Exit/Defense Seminar(s)

b) For Students Who Have Completed Prerequisites (Sample):

Year 1		EPI202 EPI205 EPI290 Elective(s)	EPI203 EPI206 EPI290 Elective(s)	EPI204 EPI207 EPI290 Elective(s)
Year 2	Pre-Qualifying Examination	EPI290 STA144 ⁵ Elective(s)	EPI290 Qualifying Examination	Dissertation Research
Years 3-5	Dissertation Research	Dissertation Research	Dissertation Research	Exit/Defense Seminar(s)

11. Sources of Funding: Students typically receive fellowship support and/or work as Graduate Student Researchers, eligible for tuition remission when employed at 25% or greater percent effort.

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