

EBE PhD Program Guidelines

XVI. Appendix 1: EBE Ph.D. Program Guidelines

FIRST YEAR

The general policies and procedures in the School of Biological Sciences are available at: <https://biology.ucsd.edu/education/grad/phd/requirements/index.html> and in the School of Biological Sciences Graduate Student Handbook (Bio-GSH). However, there are some differences, which are tailored to the needs of EBE students. Please read the Bio-GSH first and then this description of the EBE requirements. Unless otherwise stated in this document, all aspects of the EBE PhD program conform to School policies described in the Bio-GSH.

Goals for the EBE First Year: Demonstrate to the faculty that the student has sufficient and appropriate academic breadth to conduct a superior research program.

Probable Thesis Advisor: Each First Year EBE student has a probable Thesis Advisor. The student should contact this advisor at the start of Graduate Launch in September.

Initial Assessment: Before the start of the Fall quarter, each First Year EBE student will meet with their probable Thesis Advisor to review the student's academic and research achievements, discuss goals, and formulate a first-year training proposal document (including coursework requirements and potential rotations). This document should also be provided to the other members of their Initial Assessment Group for their reference as well. This plan will be sent to the EBE Chair and a copy will be placed in the student's file with the probable Thesis Advisor.

Required Components of the First Year: It is important that this process be completed by June 30, to satisfy University reporting requirements. Students who do not complete these components may be placed on probation by the Biology Graduate Committee (or the Dean of Graduate Studies), lose their financial support, or be dismissed from the program. Any petition for delay must be pre-approved by the School and by the Division of Graduate Education and Postdoctoral Affairs (GEPA). Please see the Bio-GSH for details.

1. Students will rotate by enrolling in BGGN 298 (Laboratory Projects in Biology) in Fall and Winter quarters and notify the PhD Graduate Coordinator of which lab they are rotating in. At a minimum, students must complete four 6-week rotations in at least two laboratories). The goal of rotations is for the student to receive mentored training in general and specialized research methods that will be useful for the student's research. During a rotation, laboratory research meetings and research seminars also provide training in effective scientific communication and introduce students to the research community at UCSD, including advanced graduate students, and postdoctoral researchers. The student's probable Thesis Advisor must approve all rotations.

2. The first four rotations can be with any UCSD or Salk faculty, but at least one rotation must be with the probable Thesis Advisor. The first rotation is set during the Initial Assessment. Subsequent rotations can be set during the Initial Assessment or as the year progresses.

3. In their first year, students must take a minimum of two graduate courses that are not on the list of excluded courses. Excluded courses: BGGN 200, 205, 208, 297, 298, 299, 500, and any BGJC, BGRD, or BGSE course. Students may optionally take undergraduate courses if they fill a specific need, but these may not substitute for required graduate courses.

4. Students must regularly attend the weekly EBE seminar series.

5. If items 3 and 4 would severely compromise a student's research or training, the student may request a limited exemption from the EBE Chair, justifying how their alternative activity is more useful to their goals. This exemption cannot completely release the student from all coursework and seminar attendance requirements during their first year.

6. All students are encouraged to apply for fellowships and grants, beginning in their First Year.

7. Complete the First Year Exam.

EBE PhD Program Guidelines

THE EBE FIRST YEAR EXAM

All students are required to take a First Year Comprehensive Examination to assess the student's *breadth* of knowledge and scientific background in the basic tenets of their field(s). Along with performance on rotations and in required courses, exam results will be used to determine the student's ability to synthesize ideas, interpret facts, and think logically. The exam will have both written and oral components. Preparation for the First Year Exam does not excuse the student from participating fully in the other First Year duties (i.e., coursework, rotations, seminar attendance, etc.).

Exam committee: The student must assemble a three-person First Year Exam committee consisting of the student's proposed Thesis Advisor and at least two regular (not adjunct or emeritus) EBE professors. This committee may have up to one Teaching Professor, if appropriate. As specified by School rules, the committee will be chaired by an Evaluation Head who is not the proposed Thesis Advisor; this individual leads the meeting and fills out evaluation paperwork.

Written portion: The First Year Exam will include a written piece of original scholarship meant to help define the student's thesis research plans. The nature of the written portion (review, grant proposal, theoretical model, etc.) will be decided in discussion between the student and probable Thesis Advisor. The document will be approximately 8-12 pages in length, double-spaced, inclusive of figures and references.

Annotated bibliography: First year students should be reading the scientific literature in their field(s) throughout their first year (and indeed throughout their graduate career). In order to prepare for the oral exam, each student will maintain an annotated bibliography of relevant literature. Entries will include: 1) the citation, 2) a weblink to the article/book etc., 3) a short summary of what the authors found, including how the work may be relevant to the student's research, and 4) a key figure from the article/book etc, with an explanation in the student's own words interpreting the figure. Note that text from published literature should never be copied verbatim into the annotated bibliography (although the figure will be). The annotated bibliography will be shared with the student's First Year Exam Committee prior to the First Year Exam, so committee members can suggest additional readings if necessary.

Oral exam: The oral exam will be scheduled for two hours (and may not be more than 3 hours long). Its purpose is to assess the student's overall breadth in their stated areas of interest, as well as provide feedback on research plans. Students should plan to give an oral presentation of their research plans, not to exceed 30 minutes, to leave time for questions and discussion. Following the presentation the committee members will ask questions and give feedback on the research plan, and will also ask questions aimed at assessing the student's breadth of knowledge in their field(s). All committee members must be present (physically or via video or teleconferencing) during the exam.

Scheduling of the First Year Exam: The First Year Exam may be completed between March 1 and June 30 of the student's first year. The student and their probable Thesis Advisor will consult on the best time (but must be completed before June 30).

Who is the exam chair?

For the EBE First Year Exam, the probable Thesis Advisor is the chair of the committee and signs on the line marked "chair". This is distinct from the Evaluation Head.

Table 1. Suggested timetable for the First Year Exam. The First Year Exam must be completed before June 30th.

Date	Action
February 15th	First Year Exam Committee membership finalized
March 1st	Student shares their Annotated Bibliography with their First Year Exam Committee (committee members have two weeks to review the bibliography)
March 15th	Student meets with members of the First Year Exam Committee to receive feedback on the Annotated Bibliography, and receive any additional suggested readings

EBE PhD Program Guidelines

May 15th	Written portion due (committee members have 2 weeks to evaluate the written portion prior to the exam)
June 1st	Oral exam

Results of the First Year Exam:

At the conclusion of the oral exam and in the presence of the student, the committee members will give feedback and suggest options for enhanced training necessary for the students to achieve their goals (readings, courses, workshops etc.). Each committee member will also assess the student's overall performance as satisfactory or unsatisfactory. Students will pass the First Year Exam if they receive two or more satisfactory assessments. Students receiving two or three unsatisfactory assessments will subsequently meet with the EBE Graduate Program Committee member and the EBE chair to decide on a course of action. Occasionally, an exam may be "continued" for a short period of time to allow a student to address specific academic weaknesses. The Evaluation Head must file the necessary exam report with the Graduate Program Chair of the School of Biological Sciences.

In some cases, after evaluating a student's first year performance (coursework, laboratory rotations, and comprehensive exam), the Graduate Committee may place the student on probationary status. Removal of probationary status may require activities such as retaking the exam, defending an oral proposition, coursework in areas in need of improvement, or other measures the Graduate Committee deems necessary. Unsatisfactory performance in multiple areas of the first-year curriculum may result in dismissal.

EBE PhD Program Guidelines

EBE FIRST YEAR EXAM ASSESSMENT FORM

Student's name:

Date:

Members of the First Year Exam Committee:

The First Year Exam is a qualifying exam. Along with performance on rotations and in required courses, it will be used to determine the student's ability to synthesize ideas, interpret facts, and think logically. It will also assess the student's knowledge and scientific background in the *basic tenets of their field(s)*. The nature of the First Year Exam may vary with the student depending on their scientific maturation. The exam will have both written and oral phases. ***The thesis advisor will summarize the comments of the exam committee.***

Comments on the written exam

(attach additional pages if necessary)

Comments on the oral exam

(attach additional pages if necessary)

Satisfactory / Unsatisfactory

Thesis Advisor signature	/	Print Name	Date
S/U			
Committee member signature	/	Print Name	Date
S/U			
Committee member signature	/	Print Name	Date
S/U			
Committee member signature	/	Print Name	Date
S/U			
Committee member signature	/	Print Name	Date
S/U			
Committee member signature	/	Print Name	Date
S/U			
Student signature	/	Print Name	Date

EBE PhD Program Guidelines

PLEASE SUBMIT THIS FORM TO THE GRADUATE PROGRAM CHAIR OF THE SCHOOL OF BIOLOGICAL SCIENCES

SUBSEQUENT YEARS

Please refer to the Bio-GSH for topics not covered here. Unless otherwise stated in this document, all aspects of the EBE PhD program conform to the School's policies as described in the Bio-GSH

Coursework

Once the student has formally selected a Thesis Advisor, they will actively engage in thesis research (enroll in BGGN 299 and BGRD 200 each quarter) and participate in lab research and/or discussion meetings (enroll in BGRD course(s) specified by their Thesis Advisor). All EBE students are expected to attend the weekly EBE seminar series and enroll in BGSE 205 (Graduate Research Seminar) on a regular basis unless they are away from campus. Students typically fulfill the Bioethics Training requirement during the second year by taking Scientific Ethics (BGGN 207) in spring quarter. In the second year and beyond students must enroll in BGSE 205 in each quarter.

It is very important for students to enroll in the correct course to avoid a permanent F or U grade on their transcripts. Errors must be corrected before the drop deadline. Petitions cannot eliminate or change grades due to student negligence. Failing grades can lead to the loss of fellowships or changes in visa status, where applicable. Please see the Bio-GSH and the UCSD Graduate Student Handbook (<http://grad.ucsd.edu/academics/index.html>) for more details.

Teaching

Students must fulfill three Apprentice Teaching Experiences during their first five years. This is the minimum requirement for all students in the School of Biological Sciences PhD program. EBE students may also teach for financial support, but this teaching for support follows a different set of guidelines (see EBE Graduate Program Support).

Annual Exams

Beginning in the second year, students must hold an annual meeting with their doctoral committee, typically May or June but no later than July 31. Table 2 gives an example timeline. Failure to hold this meeting and submit the committee's assessment to Student and Instructional Service staff will result in termination of financial support. Details are described in the Bio-GSH.

Second Year EBE students are expected to complete the **Second Year Exam** by July 31 (a graduate school deadline). The principal aim of this exam is for the student to demonstrate their *depth* of knowledge in their field, as relevant to their developing dissertation research. Two weeks prior to the exam, the student will send their committee a written document (approximately 12-15 pages double spaced inclusive of figures and references that summarizes research progress to date, and future research plans with a clear timeline. The oral exam should be scheduled for two hours (and cannot exceed 3 hours). During the oral exam students will give an oral presentation (no more than 40 minutes) focused on the same material as in the written document. With the remaining time, the committee will ask questions and give feedback on the research plan. Students should plan to demonstrate proficiency in the background literature relevant to the field in which they plan to carry out research. This exam is conducted by the student's Core Doctoral Committee (see Bio-GSH), which is composed of the student's Thesis Advisor and at least two other faculty.

Table 2. Suggested timetable for the Second Year Exam. The Second Year Exam should be completed before July 31st due to university guidelines; however, many committee members will request that the exam be held during the academic year, generally before June 15th.

EBE PhD Program Guidelines

Date	Action
May 1st	Core Doctoral Committee membership finalized
June 1st	Written portion due (committee members have 2 weeks to evaluate the written portion)
June 15th	Oral exam

If a student's research is sufficiently developed, they are encouraged to use the Second Year Exam or their Third Year Annual Exam to satisfy the requirements of the university's **Advancement to Candidacy Exam**. This exam is focused on the *dissertation proposal*; students are expected to display substantial research progress, and present clear and realistic plans for at least three thesis chapters. This exam should be scheduled for 2 hours, and cannot exceed three hours. As with other exams, students should send the written portion two weeks in advance of the oral exam. Any completed manuscripts should be sent to the committee at this time, in addition to a progress report for other work, and a detailed description of planned future research. The oral presentation should be no more than 45 minutes, to leave time for questions and discussion. Please see the Bio-GSH for rules and all details. Paperwork must be filed in advance. The thesis advisor and Core Doctoral

Committee shall determine with the student if advancement to candidacy is appropriate. The Advancement to Candidacy exam must be passed no later than the end of the student's 4th year and requires the formal constitution of the entire Doctoral Committee (a process that takes several weeks) and scheduling through the School's Graduate Student & Instructional Services office. Please contact the PhD graduate coordinator for details. Students should consult their Thesis Advisors to determine the best time for Advance to Candidacy. For international students, advancing to candidacy in their second year can have implications for their timeline, because international students must defend their dissertations within three years of advancing to candidacy. Please consult with the Division of Graduate Education and Postdoctoral Affairs (GEPA) for details.

After the Advancement to Candidacy Exam, annual meetings should follow a similar pattern, with a written document sent out two weeks before the oral presentation, with both the written and oral components aimed at summarizing progress towards the thesis defense. Students should include a timeline in these documents and presentations, indicating what has been accomplished, and the plan for completing proposed work. Students should plan to submit their dissertation chapters for publication in advance of their defense.

Who is the exam chair?

For the First Year Exam, Advancement to Candidacy, and yearly meetings in year 3 and beyond the primary Thesis Advisor is the chair of the committee and signs on the line marked "chair". For the 2nd year exam form and this form alone, the Thesis Advisor signs on the line marked "thesis advisor" but cannot be the Evaluation head. The Evaluation head must be a different member of the committee.

Need Help?

Never hesitate to seek help from the EBE Graduate Committee representatives (student and faculty) or the EBE Chair for advice on policies and regulations; they are all here to help students succeed. The student will obtain all necessary forms by contacting the PhD Graduate Coordinator.

Contacts 2024-25

EBE PhD Program Guidelines

EBE Graduate Committee members: Andrew Barton (adbarton@ucsd.edu) and Jonathan Shurin (jshurin@ucsd.edu)

EBE Chair: Elsa Cleland (ecleland@ucsd.edu)

PhD Graduate Coordinator: Meagan Daley (medaly@ucsd)

PhD Graduate Coordinator: Valeria Zaporozhets (vzaporozhets@ucsd.edu)

Biological Sciences Graduate Program Director: Eric Bennett (ebennett@ucsd.edu)

Biological Sciences Graduate Program Associate Director Kim Cooper (kcooper@ucsd.edu)

IA Program & Staffing Coordinator: (biota@ucsd.edu) for questions about serving as an Instructional Assistant