

EBE PhD Program Guidelines

FIRST YEAR

The general policies and procedures in the Division of Biological Sciences are available at:

<https://biology.ucsd.edu/education/grad/phd/requirements/index.html> and in the **Division 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 Division policies described in the Bio-GSH.*

Goals for the EBE First Year: Demonstrate to the faculty that the student has sufficient and appropriate academic depth and 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 Orientation 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 (including coursework requirements and potential rotations). Each student will formulate a first year plan with their probable Thesis Advisor and other members of their Initial Assessment Group. 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: The process will be completed by *June 30*. 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 Division and by the Graduate Division. 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. Duration 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 your probable Thesis Advisor. The first rotation is set during your Initial Assessment. Subsequent rotations can be set during the Initial Assessment or as the year progresses. Rotations should be completed before the student begins preparations for their First Year Exam.
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.**
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 Initial Assessment Group, 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. Complete the First Year Exam.

Optional First Year Components: These options may be mandated at the student's Initial Assessment Group. They supplement, but cannot replace, required components.

1. Taking specific undergraduate courses for letter grades to acquire desired expertise.
2. Serving as a Graduate Instructional Apprentice or a Teaching Assistant. *EBE students may also teach for financial support, but this teaching for support follows a different set of guidelines (see EBE Graduate Program Support).*

Fellowships & Grants

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

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THE EBE FIRST YEAR EXAM

All students are required to take a First Year Comprehensive Examination. 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. 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.

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. As specified by Division rules, *the committee will be chaired by an Evaluation Head who is not the proposed Thesis Advisor*. The Evaluation Head gives the student written instructions on the written portion and fills out evaluation paperwork.

Written portion: The First Year Exam will include a written piece of original scholarship on a topic or topics set by the First Year Exam committee. The purpose of the written portion is to assess depth, critical thinking and creativity and to facilitate the student's thesis research plans. All work must be completed within six weeks or within a realistic deadline set by the committee. The nature of the written portion (review, grant proposal, theoretical model, etc.) and its length will be specified in advance. 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.).

Oral exam: The oral exam will not be more than 3 hours long. Its purpose is to assess the student's overall breadth and depth in their stated areas of interest. The First Year Exam will require students to exhibit *broad general knowledge of their field, including key, foundational concepts*. Topics will be identified by the committee members and given to the student at least three months in advance. Students may also request that committee members suggest topics or readings prior to the exam. All committee members must be present (physically or via video or teleconferencing) during the exam.

The disciplines within EBE are diverse, and the Thesis Advisor and First Year Exam Committee may therefore tailor a different set of guidelines for the First Year Exam. However, all First Year Exams must have written and oral components that test a student's knowledge of foundational concepts and the ability to synthesize ideas, interpret facts, and think logically.

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. The exam must be completed before June 30 to satisfy university reporting requirements.

Timeline: Students must first meet with each member of their First Year Exam committee well ahead of the potential exam date to determine each committee member's required exam material. The student must submit their completed written portion by a realistic deadline set by the committee (typically within six weeks). The oral exam will be held within the following two weeks to give Committee members time to read and evaluate the paper before the Exam. An example timeline is shown in **Table 1**.

Results of the First Year Exam: At the conclusion of the oral exam and in the presence of the student, the committee members will each 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 a specific academic weakness. The Evaluation Head must file the necessary exam report with the Graduate Program Chair of the Division of Biological Sciences.

In some cases, after evaluating a student's first year performance (course work, laboratory rotations, and comprehensive exam), the Graduate Committee may place the student on a probationary status. Removal of probationary status may require activities such as retaking the exam, defending an oral proposition, additional IA responsibilities, 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.

Who is the exam chair?

For the EBE First Year Exam, the primary thesis advisor is the chair of the committee and signs on the line marked "chair".

EBE PhD Program Guidelines

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

Date	Action
February 15 th	First Year Exam Committee membership finalized.
March 1 st	Student meets with First Year Exam Committee to receive instructions on exam format and general topics.
April 1 st	Student receives topics for the written portion
May 15 th	Written portion due (committee members have 2 weeks to evaluate the written portion)
June 1 st	Oral exam

EBE PhD Program Guidelines
FIRST YEAR INITIAL ASSESSMENT FORM

Student's name:

Date:

Faculty members of the Initial Assessment Group:

Goals for the First Year: (1) to demonstrate to the faculty that the student has sufficient academic breadth and is capable of conducting a superior research program in EBE at UCSD and (2) to identify areas in which student skills and knowledge can be strengthened.

Means of achieving goals may include:

1. Taking specific undergraduate courses for letter grades to acquire desired expertise.
2. Taking a minimum of two graduate courses (other than BGGN 200, 208, 297, 298, 299, 500, or any BGJC, BGRD, or BGSE course) in their first year.
3. Rotating through labs (minimum of four 6-week rotations).
4. Taking the First Year Exam.
5. Serving as a Graduate Instructional Apprentice or a Teaching Assistant

All students must complete 3 and 4 unless a special, limited exemption is granted

RECOMMENDATIONS:

Undergraduate courses:

Graduate courses:

Required courses

BGGN 200: Graduate School Fundamentals (2 units, Fall quarter only)

BGGN 208: Biological Sciences Graduate Boot Camp (4 units, Fall quarter only)

BGGN 298: Laboratory Projects in Biology (rotations: 12 units recommended per quarter, register Fall, Winter, and Spring)¹

¹*Consult with your probable Thesis Advisor to determine the appropriate number of units. Hours of work per week correspond to the total time required for a given course, including study, preparation, etc. First year students should not take BGGN 299, BGSE 205, or the Ethics Course series. Students must take a minimum of 12 units per quarter.*

Additional courses (cannot include BGGN 200, 205, 208, 297, 298, 299, 500, or any BGJC, BGRD, or BGSE course).

Suggestions:

BGGN 203 (Topics in Ecology, Behavior, and Evolution, 3 units)²

BGGN 204 (Topics in Community and Population Ecology, 3 units)²

²*Not necessarily offered each quarter*

Rotations (four rotations in a minimum of two labs)

- 1.
- 2.
- 3.
- 4.

Rotations 2-4 are tentative assignments that may be changed with the agreement of the probable Thesis Advisor

Other recommendations:

IA assignments:

Exemptions (with justifications, attach sheets as necessary):

Each Initial Assessment group will specify the individual student's first year requirements in writing. Copies of this form are given to the student and their advisor and placed in the student's file.

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

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

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

EBE PhD Program Guidelines 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 Division'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 financial aid 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 (as a Graduate Instructional Apprentice enrolled in BGGN 5xx courses) during their first four years. This is the minimum requirement for all students in the Division 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 Proposal Exam** by July 31 (a graduate school deadline). The principal aims of this exam are for the student 1) to present a defensible dissertation proposal with a summary of the general experimental approaches to be used and 2) 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. The Thesis Advisor will fill out the evaluation paperwork. The written and oral components of this exam will consist of a student research proposal ***written in an appropriate grant proposal format and presented orally.*** The oral exam will not exceed 3 hours.

If a student's research is sufficiently developed, they are encouraged to use the Second Year Proposal Exam or their third year annual exam to satisfy the requirements of the university's **Advancement to Candidacy Exam.** **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 Division's Graduate Student 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 support, particularly if they exceed the normal 5 years. Please consult with the Graduate Division for details.

Who is the exam chair?

For the following exams (first year, third year, advancement to candidacy, etc.), 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.

Table 2. Suggested timetable for the Second Year Exam. The Second Year exam should normally be completed before July 31st.

Date	Action
May 15 th	Core Doctoral Committee membership finalized.
June 1 st	Student receives instructions on the exam.
July 15 th	Written portion due (committee members have 2 weeks to evaluate the written portion)
July 31 st	Oral exam.

EBE PhD Program Guidelines

Need Help?

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

Contacts (2020-21)

EBE Graduate Committee member: James Nieh (jnieh@ucsd.edu)

EBE Chair: Jonathan Shurin (jshurin@ucsd.edu)

PhD Graduate Coordinator: Melody Bazyar (mbazyar@ucsd.edu)

Graduate Committee Chair of the Division of Biological Sciences: Andrew Chisholm (adchisholm@ucsd.edu)

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