



The Qualifying Examination for Advancement To Candidacy for the Doctoral Degree

A Guide for Students

Purpose of the Examination

The aim of the Qualifying Examination is to evaluate the student's preparedness for a research career. The examination provides a means for a faculty committee to assess the ability of the student to use his/her knowledge and understanding of the fundamental facts and principles of molecular and cellular biology to solve current problems in the area of the student's thesis research and in allied fields. The examination is approximately 2-3 hours and allows the committee to judge the student's ability to think incisively and critically about both the theoretical and practical aspects of biological research at a number of levels. For eligibility see also "Course Requirements for Graduate Students".

Eligibility

A student must have passed with a grade of B or better three approved courses. If coursework is not complete, students will not be allowed to take the exam. In all cases, extensions for the qualifying exam will not be given past the fall semester of the student's third year. In a case by case basis, students may be allowed to take the qualifying exam before the Spring semester of their second year. Approval for taking the exam early is based upon prior coursework and research experience and is at the discretion of the Advisor and the GAC.

Qualifying Examination Timetable

<i>Date (approx, see Calendar of Events)</i>	<i>Participants</i>	<i>Required/Need to have</i>	<i>Checklist</i> ✓
December			
First week	2 nd Year Students, Head Graduate Adviser and 2 nd Year Advisers	Attendance at first QE informational meeting	
By the end of the third week	2 nd Year Student and their divisional 2 nd Year Adviser	Ideas for inside and outside proposals and committee membership. For more on this meeting see sections on Committee Membership and Inside and Outside proposals	
January			
By end of the first week	2 nd Year Advisers	Email QE worksheets for each student to the GAO	
Mid month	2 nd Year Advisers and GAO staff	Final committee assignments are made. Advisers must notify outside members of the request for committee service and confirm their participation. Students are notified of the final committee assignments by the 2 nd Year Advisers	
By the end of January	2 nd Year Students	Exam date must be scheduled. You must schedule your exam at least six weeks in advance to meet all timelines. Notify the GAO immediately once the date is set but no later than four weeks prior to the exam date.	

Countdown to Exam Date			
Within one week of committee approval	2 nd Year Students	Meet with QE Chair to discuss <i>inside</i> and <i>outside</i> proposals	
Six weeks prior to the exam	2 nd Year Students	Provide QE Chair with outlines of both <i>inside</i> and <i>outside</i> proposals	
Four weeks prior to the exam	2 nd Year Students	Provide QE Chair 1 st draft of <i>inside</i> proposal	
Three weeks prior to the exam	QE Chair	Feedback to student on <i>inside</i> proposal draft	
Three weeks prior to the exam	2 nd Year Students	Provide QE Chair 1 st draft of <i>outside</i> proposal	
Two weeks prior to the exam	QE Chair	Feedback to student on <i>outside</i> proposal	
Ten days prior to the exam	2 nd Year Students	Both <i>inside</i> and <i>outside</i> proposals to all QE committee members	
One week prior to the exam	2 nd Year Students	Confirm exam date, time, & location with <u>all</u> committee members	

Committee Membership

- Qualifying Examination Committees will be comprised of four faculty; the Chair and the outside member must be members of the Berkeley Academic Senate.
- Adjunct faculty in MCB are eligible to serve, but not as Chair.
- Three of the four faculty must be members of the Department of Molecular and Cell Biology (MCB).
- At least one of these three must be from the Division of MCB with which the student is affiliated, and at least one of the three must be from another Division of MCB.
- The fourth member must be from a department on the Berkeley campus other than MCB (e.g., Integrative Biology, Plant Biology, Chemistry, Public Health, etc.). See the GAO for current listing.
- Barring unusual circumstances, the spouses or close personal relations of the thesis mentor should NOT serve on a student's Qualifying Exam Committee.
- Based on the areas of the thesis research and the outside proposal, the Second-Year Advisor, together with the student, proposes a Chair, two inside members, and one outside faculty member to serve as the Qualifying Examination Committee. The proposed committee is reviewed in mid-January by the Divisional Advisors, who may make changes to ensure that: (a) the expertise of the committee is appropriate for the subject areas to be covered in the examination; and, (b) committee service is distributed as equitably as possible for both the faculty from MCB and outside Departments. The GAO then submits the composition of the committee to the Graduate Dean for university approval.
- Once the Qualifying Examination Committee has been appointed, the student should introduce himself/herself to the members and briefly describe the areas to be covered in the examination.

Scheduling

- The student is expected to schedule and take the examination before the formal end of the Spring Semester. The GAO will provide a list of available meeting suitable room for the examination. If you are having difficulty scheduling a room you may contact the GAO for additional assistance.

Inside and Outside Proposals

- The student should inform the advisor of the subject of his/her dissertation research area and discuss a topic for an outside (breadth) research proposal. The outside proposal must meet the criteria of an original, feasible research area distinctly different from the area of the student's dissertation research. The exam will also include the general breadth area of Molecular and Cell Biology.
- Based upon the timeline above, the student presents detailed outlines for his/her two inside and outside research proposals. One of these must be focused on the specific problem being addressed in the student's dissertation research; the other must be focused on the specific subject area selected as the outside proposal.

- In preparing the proposal that describes the student's own dissertation research, the student is encouraged to consult frequently with his/her thesis mentor. In preparing the outside proposal, the student may seek general advice, literature references, and general information from faculty who may be knowledgeable about the area that the student has selected. However, Berkeley faculty are not permitted to participate directly in the conception, writing, revision, or practice (“pre-prelim”) of the outside proposal.
- Proposal Format - 12 pt type, double spaced, see below for details.
 - Abstract and Aims – limited to one page
 - Background & Significance – limited to three pages
 - Progress Report (if not included in Research Plan) – limited to one page
 - Research Plan – limited to five to six pages
 - Figures – limited to two pages
 - References
- After the completed proposals have been submitted to the Chair, each of them will be evaluated by the Chair (or by another member of the committee designated by the Chair) as per the timetable above. The purpose of the evaluation is not to identify explicitly or correct specifically any logical flaws or experimental defects, but is to establish whether the proposal provides an adequate basis for examination of the student. However, the Chair does have the responsibility to inform the student if either proposal is unacceptable and to direct revision of the proposal to the extent needed for its approval.

Format of the Examination

- Before the official examination, the student should prepare a presentation of approximately 20 minutes for each proposal. These should be used as a basis for holding practice sessions (“pre-Prelims”) with senior graduate students and/or postdoctorals who are knowledgeable about the subject matter of the student's thesis work and outside proposal topic, but are not exclusively members of the student's laboratory group.
- The student should circulate both written research proposals to the chair and all of the committee members as outlined in the timetable above
- During the oral examination the thesis proposal will be discussed first, followed by the outside proposal. In each case, the student should be prepared to give a detailed defense of the research described. In addition, the student should expect to be questioned in considerable depth not only about the general areas of the proposals, but also about his/her general knowledge of his/her major field of study.
- During the examination, the student is allowed to provide one or two appropriate diagrams or figures, but **only** if this information would be difficult to convey by use of chalk and a blackboard.
- The student may bring into the examination room only a brief “one page” outline upon which they may rely during their presentation.

After the examination:

The Chair of your QE committee is required to write an evaluation including an analysis of your strengths, weaknesses, and the recommendations of your committee. This feedback/evaluation will be sent to you and your mentor. In the case of a failure or partial failure this write-up is forwarded to the Graduate Division.

Exam Failures and Retakes

In case of a failed exam, the student must re-take the exam before the end of the following semester.