

Chapter IV. ORAL EXAMINATIONS

INTRODUCTION

IV. Oral Examinations

The qualifying examination is common to all graduate programs on campus. Since this examination is considered a major hurdle by most students and precipitates much stress and anxiety, this section includes departmental strategies to help students prepare for and survive the examination.

CONTENTS

1. Molecular and Cell Biology: Guide for Students
2. Biological Sciences: Knowing the Ropes
3. Plant Biology: "Black Book"
4. Chemistry: Time Table for Qualifying Exams
5. Political Science: Study Groups
6. School of Education: Mock Oral Examination

* * * * *

Graduate Division Resources

- "Studying for Your Qualifying Exam," reprinted from The Graduate newsletter.

Materials are available at 325 Sproul.



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 also allows the committee to judge the student's ability to think incisively and critically about both the theoretical and practical aspects of biological research.

Committee Composition

Qualifying Examination Committees will be comprised of four members of the Berkeley faculty. Adjunct faculty are eligible to serve, but not as Chair. Three of these 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.)

Where additional expertise is desirable, the student may suggest a fifth member for the committee. The fifth member may be a faculty member from another university (e.g., UCSF, Stanford, UCD, UCSC).

Timetable for Preparation for the Examination

The examination process has three phases.

- ➔ **Phase 1.** As early as possible (but no later than February 1st), students who are in their second year of graduate study must contact the Second-Year Advisor of their Division. The student informs the advisor, in person or in writing, of their dissertation research area and two additional subject areas outside of the immediate sphere of the thesis research upon which to base the examination, as required by the Graduate Division. At least one of these outside areas must be a field that could be considered central to the discipline of a Division with which the student is not affiliated (breadth requirement).

Based on the thesis research project and the two other subject areas selected, the Second-Year Advisor, in consultation with the student and with input, if necessary, from the student's thesis mentor, selects a potential Chair and other appropriate faculty to serve as the members of the Qualifying Examination Committee. The Second-Year Advisor, in consultation with the Second-Year Advisors in the other Divisions, will distribute committee service as equitably as possible over the available MCB and outside faculty and will ensure that the expertise of the committee is appropriate for the subject areas to be covered in the examination. For this reason, it may not always be possible to honor the student's initial suggestions for committee membership.

Once the committee members have been selected, the Second-Year Advisors formally notify the faculty of their committee assignments and inform the student. The student should then introduce themselves to all members of the Committee and discuss the examination with them. The Second-Year Advisors, with the assistance of the staff of the Graduate Affairs Office (GAO), inform the Graduate Division on the appropriate forms of the subject areas for the examination and recommend the composition of the committee.

- ➔ **Phase 2.** As soon as possible after selection of the committee (but no later than March 1st), the student must meet with the Chair of the Qualifying Examination Committee. At this meeting, the student presents topics and outlines for two written research propositions (one in each of the two outside subject areas chosen for the examination in Phase 1). At this meeting, the Chair will evaluate the proposed proposition topics for their appropriateness, especially with regard to satisfying the breadth requirement.

If the proposition topics are acceptable, the Chair grants approval to proceed to the next phase. If a student is unable to generate two acceptable proposition topics by March 1st, the topics will be assigned to the student by the Chair after consultation with the committee members.

Once approval of the proposition topics has been granted by the Chair, the student has three weeks in which to compose and submit to the Chair the completed propositions. The idea behind the propositions is to provide an explicit discussion of experiments that would either lead a field to a new level of understanding, or solve a current problem in a field, or resolve a long-standing issue in a field. Each proposition should be prepared in the manner of a mini-grant proposal (Abstract, Background & Significance, Specific Aims, and Experimental Plan). Each proposition should be as concise as possible and should under no circumstances exceed 10 single-sided double-spaced typewritten pages of readily legible type size.

Phase 3. After the completed propositions have been submitted to the Chair, each of them will be evaluated by the Chair, or by an appropriate member of the committee designated by the Chair, within a week. The purpose of the evaluation is not to identify or correct any defects or deficiencies but is to establish whether the proposition provides an adequate basis for examination of the student. If either or both propositions do not meet this criterion, the student will be asked to prepare them again.

Once the propositions have been submitted and received approval, the student is expected to schedule and take the examination before the formal end of the Spring Semester (May 24th).

The GAO will assist the student with scheduling a convenient date and arranging for a suitable room for the examination.

Format of the Examination

The examination has two components:

(a) The student will present an oral synopsis of the objectives of their dissertation research and their accomplishments to date. The student will provide a sheet that summarizes the thesis research with an appropriate title and a brief abstract (no more than one half page). The student may also provide appropriate diagrams and figures, but only if this information would be difficult to convey by use of chalk and a blackboard. The student is not to bring into the examination room extensive written material upon which they rely during their presentation.

(b) The student should be prepared to defend orally the two written research propositions prepared prior to the examination and circulated by the student to all of the committee members at least two weeks prior to the examination.

A typical Qualifying Examination lasts approximately three hours.

October 1, 1990

Biological Sciences: Knowing the Ropes

Surviving Your Orals

The oral examination is a rite of passage and a big source of anxiety for most students. The Workshop for Minorities on Surviving Your Oral Exam, sponsored by the Office of Affirmative Action for the Biological Sciences, offered students strategies for preparing for the exam, tips on how to handle the unexpected and on minimizing anxiety, and assistance with presentation skills.

Format

While the workshop was targeted to minority students in the biological sciences, it was open to all students. During the 1 1/2 hour session a panel consisting of two professors, a counseling psychologist, and two graduate students spoke, addressing the questions outlined for them by the Affirmative Action Coordinator for the Biological Sciences (see letters on the following pages). The audience was invited to interject questions and comments at any time during the panel discussion.

Cost

The workshop costs were minimal and included the price of copying flyers and purchasing refreshments.

*A Professional Development Workshop Series
for Minority Students and Research Personnel
in the Biological Sciences*

Knowing the Ropes

SURVIVING YOUR ORAL EXAM/PRELIMS

**TUESDAY, MARCH 15, 1988
10:00 -11:30 am
1005 Life Sciences Building**

**Strategies for preparing for the exam
What to expect. How to handle the unexpected.
Minimizing Anxiety**

Panel:

**Dr. Gary Firestone (Professor, Physiology/Anatomy)
Dr. John Gerhart (Professor, Molecular Biology)
Dr. Robert Mixson (Counseling Psychologist, Counseling Center)
Ms. Maria Nieto (Grad Student, Microbiology/Immunology)
Mr. Bob Denver (Grad Student, Zoology)**

BRING YOUR QUESTIONS!!

**(Non-Minority Grad Students are of course more than welcome, but please
call ahead since there is limited seating — Thanks!)**

he Office of Affirmative Action for the Biological Sciences, College of Letters and Sciences

FOR MORE INFORMATION CONTACT: Barbara Hayashida at 643-8583

(SAMPLE LETTER TO FACULTY PARTICIPANT)

February 11, 1988

College of Letters and Science
Office of Affirmative Action
for the Biological Sciences

mailing address:
c/o Dept. of Physiology/Anat
2549 LSB phone: 3-8583

TO: Dr. Gary Firestone
Dept. of Physiology/Anatomy
FROM: Barbara Hayashida
Affirmative Action Coordinator
Biological Sciences
RE: Graduate Minority Workshop on Taking your Orals

Thank you very much for agreeing to be part of the panel I am organizing on surviving your oral exam. The following are questions that often perplex students. Perhaps these can serve as guidelines for the faculty part of the discussion. Feel free to add other dimensions or anecdotes to your part of the panel.

I envision that the panel will consist of 2 faculty members who will talk about what faculty may expect from the student and how to prepare academically for the exam, 2 students to relate their experiences studying and handling themselves during the exam, and a counseling psychologist to talk about how to prepare psychologically for the exam. I am allotting about 10 minutes maximum for each speaker. If this is too long or too short, let me know. There will be a question/answer period afterwards. I have set the workshop to be held Tuesday, March 15 from 10 am to around 11:30 am. The location will be 1005 Life Sciences Building. Any questions, call me at 3-8583 or leave a note for me via the Dept. of Physiology.

Some common questions

- 1) What abilities are the faculty looking for in a student's performance at an oral exam? Why is the oral exam one important way of evaluating a student working toward the PhD?
- 2) How do you choose your three areas of study?
- 3) How do you choose your orals committee?
- 4) How important is it to talk to the members of your committee? What should be the content of this discussion? How should students approach their committee members? What kinds of questions will produce useful information for the student?
- 5) Are there ways that students can tailor the exam to their interests and strengths? How do you do this?
- 6) To what extent are you required to know facts and to what extent are you expected to synthesize ideas? Can you describe the spectrum of this? Can you give examples of both types of questions that have appeared on orals exams you have been on?
- 7) What are some of the formats for orals exams? Possible scenarios. Is the atmosphere generally supportive or grand inquisitorial? Do the faculty try to put the student at ease? What are some of the

scenarios you have witnessed?

8) How do you know how much to study? How do you contain the studying?

9) Other suggestions on how to prepare.

NOTE: Could you mention that each department has different requirements on the composition of the committee and the timetables for taking the exam, as well as format (some departments require written exam). Consequently, students need to check carefully with graduate secretaries and major professors for particulars like number of members, number of members who must come from outside the department, whether your research advisor can be on the committee, when to constitute the committee and submit paperwork, particular format, etc.

February 10, 1984

College of Letters and Sciences
Office of Affirmative Action
for the Biological Sciences

TO: Ms. Maria Nieto, Graduate Student
c/o Goodenow Lab/Genetics Dept.
FROM: Barbara Hayashida
Affirmative Action Coordinator
Biological Sciences
RE: Graduate Minority Workshop on Taking the Oral Exam

mailing address:
c/o Dept. of Physiology/Anatom
2549 LSB phone: 3-8583

Hi Maria! Thank you for agreeing to be part of a panel on surviving the orals exam. The following questions can perhaps serve as a guideline for input by student reps on the panel. Feel free to add other dimensions or anecdotes to your part of the discussion.

I envision that the panel will consist of 2 faculty members who will talk about what faculty may expect from the student and how to prepare academically for the exam, 2 students to relate their experiences studying and handling themselves during the exam, and a counseling psychologist to talk about how to prepare psychologically for the exam. I am allotting about 10 minutes maximum for each speaker. If this is too long or too short, let me know. There will be a question/answer period afterwards. I have set the workshop to be held Tuesday, March 15 from 10 am to around 11:30 am. The location will be 1005 Life Sciences Building. Any questions, call me at 3-8583 or send a note via Dept. of Physiology.

Some guidelines for your part of the panel

- 1) What is the single most important piece of advice you would give a student preparing to take the orals?
- 2) How did you start defining your three areas of study and getting your committee together? What questions did you ask your committee members?
- 3) Did you talk to other students in your area of study who already took the orals? Were they helpful?
- 4) How did you go about studying for the orals? How long did you study? Did you make notes? Did you ask yourself questions you thought might be on the exam? Did you do a mock orals? Would it have been helpful?
- 5) How did you feel about taking the orals? How did you handle stress before and during the exam?
- 6) Briefly describe what went on in your orals? What were some of the questions and at what pace were they asked? Were there any that you really didn't know the answers to? How did you handle them? What were the faculty like? (supportive, stern, humorous, terrifying?) How did you feel during the exam?
- 7) Looking back, what was the best thing about the orals (if there was anything?).

Plant Biology: "Black Book"

The "Black Book"

Students in Plant Biology have continued the tradition of the "black book" from the former Botany Department. The "black book" is a collection of qualifying exam questionnaires completed by graduate students who have just recently taken their qualifying examination. The book is intended to assist students who are preparing for their exams.

Preparation for Orals

The graduate representatives in the department maintain the book, reminding students who have recently taken the exam to fill in the questionnaire while they can still remember the "gory particulars." Students who are preparing for their exams may review the questionnaires for comments on specific exam questions, general advice, and tips on how to study for the examination.

Questionnaire Format

The questionnaire lists the date of the examination, major professor's name, student's name, date of the examination, and members of the examination committee. It is divided into four response sections: 1) comments on and specific questions by committee members; 2) general advice; 3) how to study; and 4) fields in which you would be willing to counsel prospective examinees.

Chemistry: Time Table for Qualifying Exams

Preparation for Qualifying Exam

In preparation for the qualifying examination, each candidate is required to present a seminar at the weekly Graduate Research Conference (GRC) approximately two weeks prior to the examination itself. Each exam candidate receives a letter from the vice-chair of the department indicating the date, time, and location of the scheduled exam, the composition of the exam committee, and a time table for the exams. The time table is reproduced below.

(SAMPLE)

TIME TABLE FOR QUALIFYING EXAMS

Approximately two months before the scheduled oral exam, the candidate should start a review of the literature to select an "outside topic" for this part of the examination.

Approximately six weeks before the oral exam, the candidate should meet with the chair of his or her exam committee to secure approval of the topic and paper chosen for the appraisal and to agree on the substance of the GRC seminar. The title for the GRC seminar should be given to the graduate assistant in the department office (419 Latimer) by the **Monday, 17 days** before your GRC date. The title will be announced in the College's weekly seminar calendar. (A "to be announced" title makes the student look poorly prepared and disorganized.)

Approximately two weeks before the GRC seminar, the candidate should meet with the chair of his or her exam committee to receive approval of the one-page seminar abstract, which must be given to the graduate assistant in the department office by the **Monday, 10 days** before your GRC date. The heading on the abstract should include the words "Graduate Research Conference" and the date of the seminar.

Approximately two weeks before the oral exam, the candidate should meet with the chair of his or her exam committee to secure approval of the one-page abstract of the appraisal of the outside topic and to discuss the seminar presentation and any other questions the candidate may have about the upcoming exam. Five copies of the abstract and any other materials to be distributed to the exam committee should be given to the graduate assistant in the department office at least one week before your oral exam.

Preparation for the qualifying exam should reinforce rather than interrupt the student's progress in research. The disappearance of a student from his or her research group for a long period of time "in preparation for orals" is, therefore, strongly discouraged. This is the reason for the above two-month lead time.

Political Science: Study Groups

Study Groups

Students in Political Science initiate and organize study groups to prepare for their preliminary examinations. Study groups usually include all the students who will be writing the examination during the current semester. Students often ask that faculty members from the current exam committee meet with them to talk about the exams and the best way to study for them.

Examination Questions

Students are free to suggest examination questions to the examination committee chair or to the graduate assistant, who passes them on. Some faculty members will even solicit such suggestions. Study groups will often work together formulating examination questions, and these, or slightly modified versions, will appear on the examination.

File of Examinations

The graduate office keeps a file of exams going back about 10 years. Students may make copies of these if they wish, and the study groups often use the materials while preparing and discussing questions.

Study Methods

"In one study group we got together and discussed the material we had all read based on the questions that we put together. The second group's members divided up readings and exchanged outlines of their assigned texts. The preparation was definitely helpful. I wouldn't have had a chance of passing without it," said one examinee.

School of Education: Mock Oral Examination

Mock Oral Examination

Several months before the scheduled oral exam, the student's adviser assembles a group of two or three other advanced doctoral students, and together they conduct a mock oral examination with the adviser serving as the chair. It is most valuable if, among the students acting as faculty, there is at least one who recently passed his or her orals.

One professor reports that he has regularly done this with his students who say that the real oral examination is a "piece of cake" after the rigorous questioning in the mock oral exam.