Qualifying Exam FAQs & Advice for Students

First, let's define some terms: DGS is the faculty Director(s) of Graduate Studies, who is currently Yun Zhang, yzhang@oeb.harvard.edu. The OEB Graduate Administrator is Lydia Carmosino, lydia_carmosino@harvard.edu. You can also reach us at dgs@oeb.harvard.edu.

Second, you should check out the detailed explanation of the Qualifying Exam process on the Graduate program website - http://students.oeb.harvard.edu/degree-requirements.

What is the deadline for taking my quals?

Your quals must be completed by the end of your second year (i.e., June 30th) in order to remain a student in good standing in the department. If there is some unavoidable delay (e.g., necessary fieldwork, personal illness, etc.), you can request an extension with cause from the DGS. The DGS will work with you to set a new timeline for completion of the quals. Note that GSAS and OEB require that the general examinations (or their departmental equivalent) be completed no later than the end of the G3 year (see http://www.gsas.harvard.edu/handbook/satisfactory-progress-requirements.php).

Is there coursework that I need to have completed?

You should have completed all of your prescriptions, which you should have received upon admission. If you don't remember what your prescriptions were, ask the OEB Graduate Administrator or the DGS. These courses need to have been completed with a grade of B- or better, and your overall average in all your completed courses needs to be a B- or better.

OK, so where do I start? What does a typical G2 year look like?

1. Presumably by the end of your G1/beginning of the G2, you will have sketched out the rough dimensions of your thesis plan with your advisor and will be working in earnest on collecting preliminary data to refine the plan.
2. You may be teaching for the first time this year. Most people decide to teach in the fall so that they can have the spring free to study, but this may vary depending on exactly when you want to take your qualifying exam (quals). Some people take them in the fall/winter if there are research or personal reasons to do so. However, if you can teach something in the spring that is closely related to your thesis topic, it might actually help you study.
3. Most commonly, students take their quals in the late spring. In that case, you should start discussing potential committee members with your advisor by November. Your Qualifying Exam Committee includes your advisor and at least THREE additional individuals, two of whom must be OEB faculty (so that's a total of three OEB faculty when you count your advisor). People's schedules fill up quickly, so ask early (we cannot emphasize this enough).
4. At the same time, you and your advisor should discuss your three Topics. These Topics should be relatively broad but not ridiculous. For example, "Evolution of Development" is good, but "Biology" is likely to be over-ambitious and "Evolutionary Developmental Biology of Lower Eudicots" is too narrow.
5. Once you have settled on your committee members and Topics (no later than the end of the fall semester), you should inform the DGS of your choices. This can be done electronically or in person. The latter is certainly preferable if you have any outstanding questions or concerns, but it's not required. Note that the DGS may recommend changes to either the topics or the committee composition.

6. As soon as possible, schedule your qualifying exam. **Your Qualifying Exam should be scheduled for a THREE HOUR PERIOD.** You should notify the DGS and the OEB Graduate Administrator of the date and time no later than a month before the exam.
7. OK, now you need to make an honest self-assessment (with some consultation with your advisor). What is the most productive way for you to study? Do you just want to focus on studying full time or do you find it better to have other activities, like lab work or teaching? These considerations, along with the progress of your preliminary data, will help you decide how to balance studying relative to other activities. If you do want to study full time, set a specific deadline for when you're going to stop working in the lab and just focus on studying.
8. During the months before your exam, in addition to studying, you should be developing your Thesis Proposal, Topic Syllabi, and Thesis Presentation (more on those below).
9. **You are REQUIRED to provide your committee and the OEB Graduate Administrator (Lydia) with final versions of your thesis proposal and three syllabi no later than two full weeks before your qualifying exam date. If you fail to do so, you will be REQUIRED to postpone your quals.**
10. The week before the exam, you should pick up the **BLUE FOLDER** from the OEB Graduate Administrator. This contains necessary paperwork, including the various signature pages you will need during your time as an OEB grad student.
11. On the day of the exam, you need to bring the **BLUE FOLDER**, copies of your research proposal and copies of your course syllabi.
12. You should also know that some students choose to provide snacks and refreshments for their committee. In other cases, the student's advisor will provide snacks, etc. Many quals have been taken without any snacks at all. This practice is ENTIRELY optional, and you should do what feels right to you. Bear in mind that feeding faculty is not your obligation, and that doing so does not ensure a passing grade.
13. After the qualifying exam, your advisor will sign the Qualifying Exam form, fill out all the requested information, and write a short summary of the committee's recommendations. Return the signed **BLUE FOLDER** to the OEB Graduate Administrator and celebrate!

What should my thesis proposal look like?

The best way to think of your thesis proposal is as an analog of a grant proposal (without the explicit budgetary concerns). It should clearly present the scientific question, relevant background, rationale/significance of your approach, experimental plan, and timeline. It should contain sufficient preliminary data, whether produced directly by you or your lab, to justify the experimental plan. Most of the emphasis should be on the actual proposed experiments. Usually, there are three aims that would roughly translate into the three data chapters that will make up the bulk of your thesis. Also, like a grant proposal, your thesis proposal shouldn't be more than ~10 pages, single-spaced, no less than 12pt font with 1in margins, including figures (which are encouraged) but not including references. Note, we're not saying that it should be 10 pages, just that it shouldn't be MORE than 10 pages. Many excellent thesis proposals are 4-5 pages. Obviously, your advisor will have copious advice as to how to organize the proposal and, as always, you should consult with your committee as well to get their feedback *before* you get into the exam.

What should my syllabi look like?

We ask that you prepare three mock syllabi that represent the kinds of courses you might teach on your topics. The syllabi are a vehicle to guide the committee towards broad questions in your areas of expertise. The faculty are not bound to ask questions about the syllabi, nor are they obligated to constrain their questions to your topics. The syllabi are, however, very useful for developing constructive conversation and questioning. Another way to think of your topics and syllabi is that in order to be prepared for the knowledge portion of your quals, you need to have achieved a level of expertise in these topics that you

could teach a full semester course on the subject. This means having a thorough understanding of fundamental concepts, all seminal experiments, and controversial aspects. Keep in mind that these syllabi, and the expertise you acquire in preparing them, may come in handy when you're applying for jobs in the future!

There is currently no strict departmental policy regarding whether these syllabi should envision undergraduate or graduate courses, but we are requiring all syllabi to involve at least two meetings a week for a ~12 week course. A good rule of thumb is to imagine two undergraduate and one graduate course, at least in terms of breadth vs. depth. Discuss this balance with your advisor and committee members to see what they expect.

For each lecture/discussion topic, you should have 2-4 associated papers or book chapters, with a strong emphasis on primary literature over reviews. These represent what you think are the most important and/or exciting publications on that topic. They can be classic, seminal papers as well as the most recent, groundbreaking studies. By listing a paper on your syllabus, you are indicating that you have a mastery of that work and can discuss it in detail with your committee. That being said, this does not mean that your committee won't ask you about studies that aren't listed on the syllabus! If major papers are missing, you can expect to hear a lot about it. Again, meeting with committee members one-on-one as you prepare your syllabi will help avoid surprises.

What about my presentation?

Your presentation should be designed to take no more than ~15 minutes if it is given straight through. It should focus primarily on your proposed experiments. Do not spend a lot of time on basic background, such as "what is evolution"? or "Mendel: a review". Your ppt should not have more than 20 slides.

What happens in the actual quals?

Once your committee is completely assembled, they will ask you to step out (Don't go too far, but don't lurk right outside the door). The purpose of this is so that your advisor can give the committee their perspective on your progress and preparation. This is usually a fairly short discussion and someone will come get you when they're done.

We also recommend a step in which your advisor steps out and allows you a few minutes to speak alone with the committee. The purpose of this brief meeting is to allow you an opportunity to give your opinion on how things are going and note any aspects on which you would especially like feedback.

There are three components of your exam: 1) the thesis proposal presentation (~20 min), 2) questions related directly to the thesis proposal (likely at least an hour), and 3) questions related to your topics/syllabi (at least an hour). We do not prescribe the exact order in which you tackle these components (e.g., topics first or thesis proposal first), but we do require that you spend substantial time on both the thesis proposal AND the topics/syllabi. Before your exam, you should talk with your advisor to make a plan for the progression of the exam – Would you prefer to get the talk out of the way or would you rather start with topics questions? Would you rather give the talk straight through with minimal questions or are you happy to stop a lot? Whatever you decide, the separate thesis proposal and topics/syllabi sections will be TIMED. At least 1 hour must be spent on the topics/syllabi.

When the entire committee is satisfied with the exam, they will ask you to step out again so that they can confer about the results. They will then ask you back in and inform you immediately as to the outcome.

Can you fail your quals and what happens to you if you do?

Yes, it is possible to fail your quals. Your committee will notify you immediately as to whether you have been given a Pass or a Fail.

After the exam, students who pass the qualifying examination shall be promptly notified and approved for continuation of dissertation studies and advancement to doctoral candidacy. The Qualifying Examination Committee may pass the student, but prescribe additional coursework or other additional work (such as writing a review paper on a particular topic). Completion of this prescribed work is required before the next Dissertation Advisory Committee meeting for the student to be judged at that time as making satisfactory progress.

If the qualifying examination reveals serious deficiencies, the Committee may decide: (1) that the student be reexamined at a later date (but not later than the end of the G3 year), or (2) that the student not be admitted to candidacy for the doctoral degree. In the latter case, the Committee will recommend that further candidacy be terminated not later than the end of the ongoing academic year. The recommendation to terminate must be approved by the OEB Graduate Committee. The student, together with the advisor, may appeal any such decision by submitting to the OEB Graduate Committee written arguments for a reversal of the decision to terminate. Under such circumstances, the case will be further reviewed by the OEB Graduate Committee as well as by the Department and a final decision rendered. Note that awarding a Masters degree in such a case is decided separately based on the student's completion of the OEB requirements for an AM degree (see the OEB Program Description, MA Degree Program).

OMG, I didn't know the answer to some of their questions, does that mean I'm going to fail?

No, of course not. The goal of the qualifying exam is to judge your preparation for conducting PhD research. We want to determine the scope and depth of your knowledge in relevant areas. The easiest way to do that is to keep asking you questions until you don't know the answer. The question is how long it takes us to get to the point where you don't know the answers.

Some general Do's and Don'ts

DO consult your committee members (along with your advisor) while you're developing both your proposal and your syllabi.

DO schedule your exam as soon as possible and ask your committee to block out <u>three</u> hours. Make the room reservation at the same time. MAKE SURE YOU SPECIFICALLY PROVIDE ALL THIS INFORMATION TO YOUR COMMITTEE.

DON'T just assume that everyone will remember when your exam is. Take every *reasonable* opportunity to remind them (and their admin assistants, when appropriate) of the date and time.

DO ask your colleagues for examples of their proposals and syllabi but**…DON'T** feel compelled to do exactly what others have done.

DO practice your presentation with lab members to get feedback, and have them to give you a good practice grilling on your topics (preferably in the context of your practice presentation to make it as realistic as possible).

DON'T PANIC.