

Phase 2 qualification for PhD candidacy in the Human Genetics Program

The overall goals of the phase 2 qualifying exam are as follows:

- 1) Assess the student's ability to formulate a series of hypotheses and specific aims to test these hypotheses.
- 2) Immerse the student in scientific literature relevant to the Ph.D. dissertation.
- 3) Assess the student's aptitude to accomplish the stated Aims.
- 4) Form a thesis committee to foster and monitor the student's continued development.

The Process

The HGEN Phase 2 exam has 2 components: a written proposal, and an oral defense of the proposal.

The Dissertation Committee

The Dissertation Committee is comprised of the advisor, two members of the Human Genetics (HGEN) Program faculty, and at least one member of the Vanderbilt faculty from outside the HGEN Graduate Program. The Dissertation Committee serves as a working team to help the student in several ways including offering suggestions about experimental or analytical technique and design and providing continual encouragement to be innovative and take risks—characteristics that are crucial to long-term success in research. Therefore, it is important that the Dissertation Committee be carefully selected, with consideration of the scientific training, intellectual interests, and research activities of each Committee member. The diversity of intellectual activity that will be present in a student's research project should be reflected in the composition of the Dissertation Committee. The student and dissertation advisor propose the composition of the Dissertation Committee to the Director of Graduate Studies, who then evaluates it and, if approved, sends it to the Dean of the Graduate School for final approval. The Dissertation Committee is crucial to the trainee's research progress and professional advancement, and thus its composition should be based on sound scholarship and service to the student. Each member of the group of colleagues who comprise the examination process has distinct roles:

Graduate Student

- Is responsible for identifying and inviting committee members.
- Is responsible for scheduling the oral exam.
- Is responsible for filing qualifying exam scheduling and committee formation paperwork with the HGEN program.
- Is responsible for preparing the dissertation proposal. The student may seek input from the mentor, peers, or other collaborators in developing the proposal.
- Must submit the proposal to the committee at least 2 weeks prior to the oral exam. Ideally this is earlier than this, 1 month is usually a good amount of time.
- Will attend the oral exam on time and have slide presentation describing key aspects of their proposal prepared. They will plan to attend for 2 hours and 15 minutes to receive the results and feedback from the committee at the end of the exam.
- Will answer all questions from committee members to the best of their ability during the examination period.

Mentor

- Will not be a member of the examination committee or attend the oral exam meeting.
- Will read and approve the final version of the proposal that is sent to the committee. The mentor may also provide edits, discussions, references, other proposals, and other training and preparation for the exam.
- Should preview the slides for the exam presentation.

Committee chair

- Will convene and dismiss the exam and subsequent committee meetings, as well as keep time and lead the agenda.

- Attends the entire exam period, plus 15 minutes to communicate results to the student if necessary (2 hours and 15 minutes)
- Will compile feedback for the proposal from committee members and communicate these to the student.
- Will communicate the results of the exam in-person to the student at the end of the exam time with the program leadership team member present. This news should not be given one-on-one, and there should be at least 3 people in the room.
- Takes notes on key comments and take-aways from committee members.
- Prepares the letter summarizing exam results and committee feedback for the student.

Committee member

- Reads the proposal and submits feedback within 1 week prior to the oral exam.
- Attends the entire exam period (2 hours).
- Asks questions relevant to the proposal during the exam.
- Provides their opinion about the outcome of the exam during the committee discussion and votes for the outcome they feel is most appropriate.
- Clearly articulates the conditions they feel are necessary to progress to a pass, if any.
- May be asked to attend the communication of results if the HGEN program representative is also the chair.

HGEN program representative

- May be a committee member or chair. If so, then there may not be another HGEN rep in attendance.
- If not a member, may ask questions.
- Does not vote during outcome deliberations unless also serving as a committee member or chair.
- Serves as a secondary timekeeper and scribe.
- Ensures that graduate school paperwork and SACS surveys are completed.
- Attends the communication of results to the student.
- Determines the remedial steps necessary to achieve a pass if conditions are required

The Dissertation Proposal

The written document is based on the format of a NIH F31 predoctoral fellowship application (parts and page limits here: tinyurl.com/yvegcs7r) However, the submitted document **only** needs to have **these** parts:

- **Project summary/abstract** that was previously approved (~400 words)
- **Specific Aims** (1 page limit. This usually looks like the project summary, but with more detail and the aims more specifically described.)
- **Research Strategy** (6-page limit, **including** all figures, but **not** counting the bibliography.)
- **Bibliography** (no limit)

Process

There will be a brief time at the beginning of the meeting (15 minutes) where the student leaves the room for committee members to introduce themselves to one another and discuss the proposal. The student will present key details of their proposal and the committee members will ask questions for 1 hour and 30 minutes. The Chair will lead the proceedings and prepare the letter from the committee summarizing the results of the exam. At the end of the scheduled time, the student will leave the room and the committee will confer to determine the result and fill out the SACS survey (15 minutes). A member of the HGEN program leadership will also attend the exam, if not already in attendance as an invited member of the committee. The result of the exam will then be communicated to the student by the chair and HGEN representative and the forms signed and filed with the graduate school. Students will have 2 attempts to pass the QE2. If conditions are required by one or more committee members, they should not be so onerous that they could not be reasonably completed within 1 month after the exam.