

Ph.D. Three Circles of Knowledge for Qualifying Exam

Please find attached the new qualifying exam form, which we encourage you to familiarize yourself with since the form requires input from the doctoral committee of each PhD student. The doctoral committee chair should be preparing the first form (student preparation sheet) and providing it to the PhD student at least 3 months prior to the exam date to help the student define the scope of topics to be covered by the exam. The exam format will consist of the 3 components:

1. NIH R21 format (1 page Specific Aims + 6 page Research Strategy) research prospectus sent to the committee at least 2 weeks prior to the Qualifying Exam Date _____
2. 1 hour oral presentation on research and research plans (presentation + Q&A)
3. 1 hour Q&A session covering three circles of knowledge (Overall Bioengineering Topics, Field Specific Topics, Research Specific Topics)

The doctoral committee chair, with input from the committee, should outline areas in which the student should focus their studies related to the three circles of knowledge (general to specific). If a student fails the qualifying exam, they have one opportunity to re-take the exam within six months of the initial testing date. A repeat failure will result in dismissal from the Ph.D. program. Note that we have notified the PhD students that this will be a rigorous exam in which will require focused study of the research topics in order to pass, and we expect the committees to maintain high standards that a student has shown mastery of knowledge both in their research plan and the circles of knowledge.

For the faculty report on the qualifying exam, please record questions that were asked to the student in the mentioned categories during the oral Q&A session covering the circles of knowledge. At least two questions should be asked in each of these categories. If additional space is needed to record questions, please attach a separate sheet. Lastly, the committee must fill out the pass or no pass portion of the document, signed, and return the form to Lili Bulhoes in 5121L Engineering V.

Student Preparation Sheet for Ph.D. Preliminary / Qualifying Exam

(This form should be prepared by the PhD committee chair and provided to the student at least 3 months prior to the exam date)

Student Name (last, first) _____ UID _____

Date of Qualifying Exam _____ Date of Matriculation _____

Timeline: The qualifying exam should be taken within the first 2 years of PhD study. Failure to take the qualifying exam within 2 years of the date of matriculation is grounds for academic dismissal.

Exam Format:

The qualifying exam consists of the following three components:

1. NIH R21 format (1 page Specific Aims + 6 page Research Strategy) research prospectus sent to the committee at least 2 weeks prior to the Qualifying Exam Date
2. 1 hour oral presentation on research
3. 1 hour Q&A session covering three circles of knowledge (described below)

Poor student performance on any of these components may result in failure of the qualifying exam.

Topic Areas Covered (Ph.D. Committee chair, with input from the committee should outline areas in which student should focus their studies related to the following circles of knowledge (general to specific):

Overall Bioengineering Topics

Field Specific Topics

Research Specific Topics

Policy for Re-taking Qualifying Exam:

If a student fails the qualifying exam, they have one opportunity to re-take the exam within six months of the initial testing date. A repeat failure will result in dismissal from PhD.



Department of Bioengineering

Faculty Report for Ph.D. Preliminary / Qualifying Exam (To be completed by the Committee Chair)

PhD Committee Chair Name: _____

Student Name (last, first) _____ UID _____

Current Date _____ Date of Matriculation _____

Qualifying Exam Format: 1 hour research presentation by student
 1 hour questions in the following circles of knowledge (broad to specific)

PhD Committee Chair: Please record questions that were asked to the student in the following categories. At least two questions should be asked in each of these categories. If additional space is needed to record questions, please attach a separate sheet.

Overall Bioengineering Topics

Field Specific Topics (e.g. concerning general knowledge of biomaterials, devices, imaging etc.)

Research Specific Topics (e.g. why are particular research approaches taken?)