

Bioengineering Qualifying Examination: Student Guidelines and Timeline

Examination Process

1. Any doctoral student intending to take his/her qualifying examination in 2018 must attend a meeting with the Graduate Examinations Committee (GEC) co-chairs on April 26, 2018.

2. All oral exams will take place on a limited set of dates during June-September. The student, in consultation with his/her advisor, should **identify availabilities and complete the online form by May 17, 2018. An online scheduling form will be emailed to you shortly.**

The student's advisor will be required to confirm the timeframe through an analogous web page. The combined exam period will take place during a 3-week window, during the first two weeks of which the written document for the qualifier will be prepared.

3. At noon on the first day of the exam period, the student will receive an email from the Graduate Coordinator that lists the general topic for his/her qualifier and the committee members (3-4 faculty in the Bioengineering Graduate Group). This committee will judge the written and oral components of the student's qualifying exam, including biosciences and engineering/quantitative knowledge base (see evaluation forms). The scheduling of the room and the committee will be handled by Kathleen Venit (kvenit@seas.upenn.edu).

4. After the student completes the written document, the student must e-mail this final qualifier document to his/her committee members and the Bioengineering graduate coordinator (kvenit@seas.upenn.edu) by noon on the last day of this first two-week period. The student is not allowed to send any subsequent versions to his/her committee. The student must comply with this first deadline for successful completion of the exam.

5. The student then has another 7 days (immediately following the first 14-day period) to work on the presentation, which is to be delivered on the day the committee meets. At the end of the 21 days, the student is allowed to submit a 1-page written update on the qualifier, indicating any changes or clarifications; this is optional and gives the student an opportunity to address any significant change in thinking that arose while preparing the presentation.

While preparing the qualifier (both written and oral components), the student is not to consult the advisor, peers, or anyone else. No scientific help is allowed. The Bioengineering graduate coordinator, the GEC chair, and the Bioengineering Graduate Group chair will provide administrative guidance, if necessary.

5. The student makes a presentation to the committee who evaluate both the written and oral parts according to the guidelines stipulated by the Graduate Group. The student should take a copy of the evaluation form to the oral exam.

6. The committee will meet immediately after the exam in the absence of the student to discuss the student's performance and to make its recommendation. Possible outcomes are: successfully completed, retake, and failed (only after retake).

7. The results are approved by the Graduate Group Chair and communicated to the student.

Formatting Guidelines

The written document should take the form of an NIH R21 proposal, including sections for Specific Aims, Significance, Innovation, Approach, and Literature Cited. The proposal should be no longer than 7 pages, using at least 0.5" margins, single spacing, and 11-point font (preferably Arial). As a rough guideline, one page should be used for Specific Aims, 1-2 pages for Significance and Innovation, and <2-5 pages for Approach. The Literature Cited section does not count towards the page limit. Examples of successfully funded NIH proposals can be found here: <http://www.niaid.nih.gov/researchfunding/grant/pages/appsamples.aspx>. These examples also include summary statements that highlight the perceived strengths/weaknesses by reviewers, which are helpful to review to understand common strengths/pitfalls.

For the oral portion of the exam, your presentation should last 10-15 minutes when uninterrupted (no more than 10 slides for planned presentation, excluding the title slide; backup slides are permissible, but only to address committee questions).

Contacts

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Bioengineering Graduate Coordinator

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Brian Chow, *Co-Chair, Graduate Examinations Committee*

Dr. Ravi Radhakrishnan
Chair, Bioengineering Graduate Group