

Preliminary Exam Policy in BME

Updated 3/1/2019

The doctoral preliminary examination is a graduate school milestone that signifies that a student is ready to become a PhD candidate. Effective for all Ph.D. students matriculating after Fall 2016, the following format for the exam has been adopted for BME. As per graduate school guidelines, all students are expected to stand for the preliminary examination no later than 36 months after matriculation. Students matriculating prior to Fall 2016 may be eligible to follow previous guidelines. Please consult your advisor or DGS if you need further advice on previous formats.

1. **Format** – The preliminary exam is intended to 1) check degree milestones and 2) assess the student's ability to propose and justify research directions. The proposed research is not meant to be binding as aims for the students' research directions, rather for the student to demonstrate potential for conducting PhD research.

Exam components:

- 1) A 7 page writeup that proposes 2-3 specific aims with the following sections:

Specific Aims (1 page): Describe the proposed research directions.

Significance (1-2 pages): Place research in context with current literature while also stating impact.

Novelty (<0.5 page): Elucidate the new aspects of the proposed research.

Approach (3-4 pages): Describe anticipated research steps, giving preliminary results where feasible. Data are not required for this component but not prohibited.

- 2) Oral presentation which includes:

Overview of student progress to date (coursework, TA, RCR, publications, conferences)

Research proposal (1 slide specific aims, 2-3 slides significance, 1 slide innovation, 10-15 slides on approach)

Guideline is for the presentation to contain 25-30 slides.

- 3) Oral examination by committee related to research proposal:

Examination will focus on student's process in proposing and justifying research directions but merits of approach may be discussed.

Faculty may ask students about relevant technical expertise.

Guideline for duration of 1-2 hrs.

- 4) Committee – require 4 members to satisfy graduate school regulations.

Research advisor serves as chair of committee

Three additional members will be asked to join the committee by the student in consultation with their advisor. The DGS will provide names of additional faculty who are interested and available to serve on prelims outside of their area.

Distribution includes 3 BME faculty members with at least two primary faculty members.

2. Timing – The target for the preliminary exam is the end of the second year. Students may schedule their exams beginning on the first day of classes of the Summer Session I and must complete their exams by the end of October the following fall. Students will be notified in Spring Semester of their 2nd year that they are expected to file a committee by April 1 and to schedule the exam between the start of the first summer session (2019: May 15 - June 24) and Oct 31. Once the exam has been scheduled, students are expected to provide the written document to their committee no later than 2 weeks before the exam. If the written document is not distributed to the committee with sufficient time before the oral examination, the student may be required to reschedule.
Students who are not compliant with committee selection and exam scheduling will receive reminders, followed by notices of consequences. Students who do not stand for the preliminary exam within the designated time period will be asked to leave the program, unless satisfactory reason for delay is given.
3. Preparation – The two required PhD seminars will be used to prepare students for the preliminary exam. The first required seminar includes a component on oral presentation. The second required seminar for PhD students occurs during the 2nd semester of the second year and includes preparation for the written report for the preliminary exam. Students requiring additional preparatory work for either of these components will be directed to further coursework or other learning resources.
4. Enforcement - The exam format has students completing the exam at the end of the second year. While some reasons are acceptable excuses for delays (including medical leave, internship), all students must hold their exam in this period or be asked to leave the program. Several reasons previously used for delay of the preliminary examination are no longer applicable to this new format. For example, a simple change of research direction or lack of a particular resource are not acceptable reasons for delay. Students who pass the exam *may* change research groups but do not require a new exam. Students who do not pass the exam will be offered the opportunity to take the exam again within the following year, with consent of the committee. As per graduate school policy, any re-examination must occur no earlier than 3 months after the date of the first exam. The committee may recommend that the student take specific courses to better prepare them, including technical courses, a writing course or an oral presentation course. To keep in line with graduate school rules, the entire committee must vote in favor of allowing a new exam and the same committee must vote unanimously in favor for passing the second exam.
5. Documentation – Students are required to bring hard copies of the examination report and evaluation rubric to the exam. The results of the examination must be reported to the graduate school using this exam report and the evaluation rubric must be returned to the department. Both items should be returned to the DGSA upon completion of the exam.

Thesis proposal:

To preserve aspects of our current preliminary exam, a thesis committee meeting will be expected on or around the end of the 4th year. This deadline is not firm but the meeting must be held at least 6 months *before* the thesis defense. This meeting will be similar in tone to our current committee meetings where the main goal is to vet the thesis research proposal with benefit of advisory committee. Additional members can be added or removed from the committee to provide better feedback on research directions.

This meeting includes a written component which builds upon the prelim (6 pg.) research document to create a full R01 type proposal (12+1 pgs.) by including more preliminary work, literature review and greater details in the approach. This meeting will consist of an oral presentation by the PhD student which should be more open ended and provide an opportunity for greater discussion of research directions (target 30-45 minutes). Completion of remaining degree requirements will be confirmed at this meeting. (coursework, TA, RCR, etc.).

Timing: This meeting can be held any time after 4th year but delays will be tracked by DGS office with extensions of more than one year (end of 5th year) requiring written justification and yearly reports