

Ph.D. Qualifying Examination Policy

Department of Biomedical Engineering

Revised: 11 Feb 2002

Purpose

The Ph.D. qualifying examination is an early review process intended to provide an initial assessment of a student's preparation and capacity for continuing and completing a Ph.D. degree in Biomedical Engineering.

Criteria

In order to pass the qualifying examination, a student must: demonstrate (1) breadth and (2) depth in a specific area of Biomedical Engineering, requiring a sophisticated understanding and integration of the clinical, biological, and engineering aspects of the given problem. This is achieved in both a written form and an oral presentation.

Timing

The qualifying examination will be given once a year in the summer. Before taking the qualifying examination, the student must (1) must be enrolled in the Ph.D. program, and (2) completed the core course requirements as specified by the Graduate Program in Biomedical Engineering or have already completed his/her master's degree. The examination must be undertaken within two years of starting the doctoral program.

Administration of Examination

The qualifying examination will be administered by the Qualifying Exam Committee .

1. Each Qualifying Exam Committee will be comprised of a faculty panel of four persons (includes the Chair), assigned by the Graduate Program Director or the Chair of the Qualifying Exam Committee. At least three of faculty must be in the BME Graduate Program.
2. The qualifying examination is both a written and oral examination. Once the decision has been made by the student to participate in the examination, the faculty will provide a set of Biomedical Engineering problems. Within 2 days, the student will then select one of the problems (submitted by the Graduate Faculty), at which time he/she will inform the Qualifying Exam Committee Chair. The written portion of the examination will be due in one month. Late submission of the written portion will result in postponement of the exam to the following cycle (next summer).
3. The written portion of the exam should be structured as follows:
 - a. Maximum 25 pages in length
 - b. doubled-spaced
 - c. 1 inch margins all around
 - d. 12 point font
 - e. includes schematics/Figures
 - f. covers clinical, biological and engineering concepts
4. Following submission of the written portion, the Qualifying Exam Committee Chair will set a date for the oral part of the examination, no later than 2 weeks.
5. The student should prepare for a 30 minute presentation. The actual duration of the oral examination will be approximately 2 hours (90 minutes allowed for questions).

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Qualifying Exam Committee Responsibilities and Decisions

The Qualifying Exam Committee is primarily responsible for questioning the student's written and oral preparation, as well as fundamental knowledge in his/her chosen area (problem) and for determining the outcome of the examination. The Qualifying Exam Committee can also take into consideration the student's academic performance leading to the qualifying examination. The outcome of the examination can be either:

- 1. PASS**
- 2. FAIL**
- 3. CONDITIONAL PASS**

PASS indicates that the student has displayed a clear understanding of the problem and has presented a cohesive and innovative solution to the problem. The student is then allowed to continue with his/her studies.

FAIL indicates that the student has NOT displayed a clear understanding of the problem at either the biological or engineering level, or both, and has NOT presented a cohesive and innovative solution to the problem. This will allow the student to correct the identified deficiencies in their knowledge, as well as to allow one more chance to retake the examination in the following year. Failure of the second attempt will result in the expulsion of the student from the Ph.D. program.

CONDITIONAL PASS indicates that some deficiencies were identified and that additional remedial work is necessary for completing the necessary requirements of the examination, as determined by the Qualifying Exam Committee.

The chair of the Qualifying Exam Committee will provide a written report of the examination outcome with the final decision to the Graduate Program Director.

Appeals and Grievances

Any challenge to the decision of the Qualifying Exam Committee should be reported directly to the Graduate Program Director. If an appeal is made formally, a subcommittee appointed by the Graduate Program Director will review the appeal and present an appropriate response.