
Biomedical Engineering PhD Guidelines

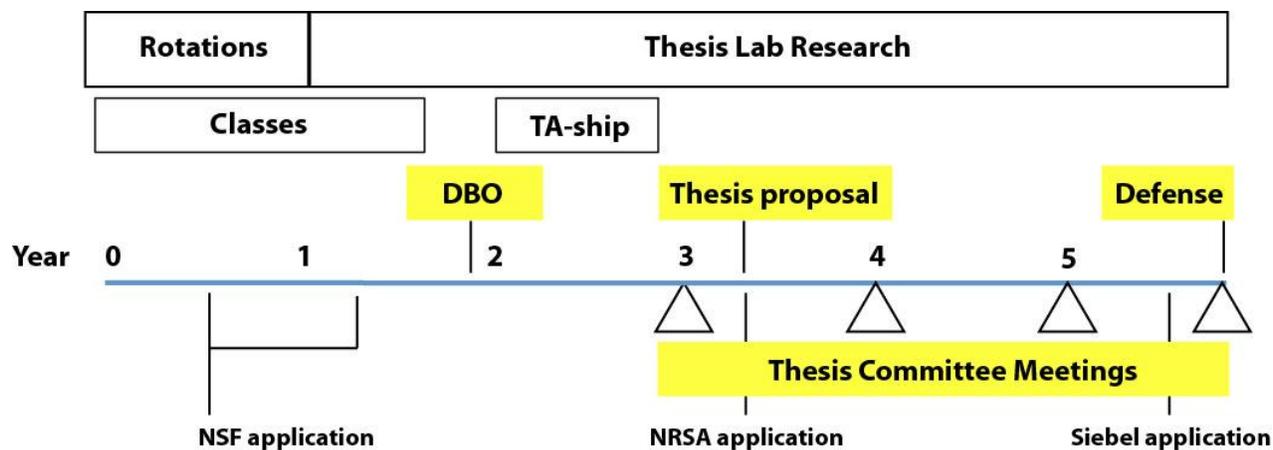
Johns Hopkins School
of Medicine

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University requirements for the degree of Doctor of Philosophy

- Minimum of two consecutive semesters of registration as a full-time, resident graduate student.
- Successful passing of the Doctor of Philosophy Board Oral Examination.
- Dissertation approved by at least two readers and certified by them to be a significant contribution to knowledge and worthy of publication.
- Certification by the Program Director that all requirements have been fulfilled.
- Submission of a dissertation to the library that adheres to the Doctor of Philosophy Board Dissertation Guidelines.
- The program may determine the allowable time to complete degree requirements but in no case may that time exceed 12 years. Any approved leave of absence would not count toward the 12 years.

Time Requirements for BME PhD

The Doctoral Board Oral (DBO) examination should be completed around the end of the second year (no later than 30 months from matriculation). Within 6 months after passing the DBO the student and advisor are expected to form a thesis committee. The first thesis committee meeting should be held approximately six months, and no later than 12 months, after completing the DBO. In the event that a student does not pass the DBO in their first attempt, the first thesis meeting should be held no later than 6 months after passing the DBO.

In the event that a student changes thesis labs, the first thesis meeting should be held no later than 9 months after joining the new lab. The student, new thesis advisor, and Program Director will formulate a revised timeline for completion of degree based on circumstances.

It is expected that students will meet annually with their thesis committees. Student, advisor and committee members must complete and sign Thesis Committee Meeting form that contains written feedback on the student's progress.

After completion of Year 6 (72 months post-matriculation), meetings should be held semi-annually at which Program Director's designee (other than the student's mentor) must be present.

A terminal masters will be recommended if PhD is not complete by end of year 8, unless the Program Director grants permission for continued study. [NOTE: Official leaves of absence are not included].

Labs with delinquent students will be closed to rotation students unless the Program Director grants permission.

Registration and student status

To be classified as a graduate student in the School of Medicine, the student must be admitted to a graduate program, be registered on a full-time basis and be on campus. Status as a Special Student is awarded only to graduate-level students who are not candidates for a Johns Hopkins advanced degree; time as a Special Student may not exceed 1 year. Once students begin their graduate course of study toward a degree, they must complete a minimum of two consecutive semesters of registration as a full-time, resident graduate student. In order to be registered full-time, a student must engage in a full-time program of courses, seminars and/or research as approved by the graduate program. The School of Medicine does not define full-time in terms of credits, courses, or any other such unit. To qualify as a resident student, the student must be present on campus and working toward fulfilling the requirements for the degree.

The program certifies each student's status at the beginning of every academic year. The program may determine the allowable time to complete degree requirements but in no case may that time exceed 12 years. Any approved leave of absence would not count toward the 12 years.

Registration

Students must register each semester from matriculation through graduation. A student's departure from the School of Medicine without an approved leave of absence will be deemed a permanent withdrawal from the student's program. If on leave, students are expected to provide the Registrar's Office and their program with an updated current address, and are expected to respond to all communications and mailings within the deadlines specified. Students who withdraw from the program must be formally readmitted, at the discretion of the Program Director, before they may return to the School of Medicine. If readmitted, they need not pay a second application fee but must pay all outstanding fees. Failure to register by the published deadlines of the School of Medicine may be interpreted as a withdrawal from the program.

Change in Registration Status

Students may request a Leave of Absence. Students must obtain the signature of the Program Director, and the signature of the Director of International Student and Scholar Services if he or she is an international student before submitting their application for the change in status.

Leave of Absence (LOA) – Program Director must approve all requests for leaves of absence. Graduate students may request up to twenty-four months of leave of absence, when medical conditions, compulsory military service, or personal or family hardship prevents them from continuing their graduate studies. Financial difficulty alone does not warrant a leave. To be approved for a leave of absence, graduate students must provide the proper documentation for their given situation, as indicated below:

Medical Condition: a letter from a physician (this may be a letter from a doctor at the University Health Services or the University Mental Health Services), the Student Assistance Program, or the Office of Student Disability Services.

Military Duty: a letter or verification from the Armed Forces.

Personal or Family Hardship: a letter from the applicant describing the hardship.

During the leave period, a student may not be enrolled at another university. School of Medicine policy requires that health insurance be continued during the period of leave. Prior to requesting the LOA, it is also recommended that the student contact the Health Insurance Coordinator in the Registrar's Office for information on how the LOA will affect their health insurance coverage and premium responsibility. When on an approved LOA there is no tuition charge; the period of leave is regarded as an interruption of the degree program.

A student on LOA may not make use of any School of Medicine services except University Health Services, University Mental Health Services and the Student Assistance Program, provided insurance and health fees are being maintained. For students on medical leave of absence, School of Medicine policy allows the program/department to pay Health and Dental Insurance premiums and University Health Service fees for a period of up to one year if requested by the student. A student on a leave of absence who wishes to continue working at the School of Medicine must be hired through the Human Resources division of the department employing them. No exceptions can be made.

When the Program Director has granted a leave of absence, a Time Status Change form must be completed and submitted to both the Associate Dean for Graduate Education and the Associate Dean/Registrar, who will modify the student's enrollment record.

Returning from Leave of Absence

When returning from leave of absence, a graduate student must submit documentation (from one of the sources below) to their Program Director that explains what progress has taken place during the student's absence that would enable him/her to be successful upon return.

Medical Condition: A Fitness to Return evaluation must be conducted by the Student Assistance Program prior to resumption of studies.

Military Duty: a letter or verification from the Armed Forces.

Personal or Family Hardship: a personal letter.

Additional letters of support (e.g. from an advisor, department chair, etc.) are welcome.

It is the responsibility of the Program Director to notify the Associate Dean/Registrar that the student is returning to full time status.

Any exceptions to these guidelines must be approved by the Associate Dean of Graduate Student Affairs and reported to the Associate Dean/Registrar.

Rotations

The aim of laboratory rotations is to allow students to learn new techniques and to find a suitable laboratory for their thesis research. Before matriculation, the students should be contacting the faculty to set up the first rotation. Ideally, the first rotation begins when the student matriculates. However, in the case that the student is taking Anatomy in the medical school curriculum, rotations can begin in the first available block of time after completion of the medical school course. Students are required to complete at least one rotation before the

first of September of the second year, or 1 year from the date of entry into the program. Rotations should last a minimum of 8 weeks.

Students are required to find a thesis laboratory within 1 year after matriculation. However, on occasion despite reasonable efforts set forth by the student a match with a thesis mentor may not be found by the end of this period. In that case, the student will meet with the Program Director to carefully select the next rotation.

To start a rotation, the student must submit the Rotation Agreement form to the BME PHD office. This form is signed by the proposed mentor. Within one week of completing a rotation the student will prepare a one-page description of the work accomplished during the rotation and forward it to the Program Administrator. Each time the student starts a new rotation this form must be completed and submitted to the program office.

Who can be the thesis mentor?

The School of Medicine has a policy that specifies that a graduate student must be overseen by (i.e., be the responsibility of) a faculty member who holds a position as Assistant, Associate, or Full Professor. Faculty who are instructors, or non-tenure track, cannot be designated as the primary advisor for a student. Non-tenure track faculty can be part of a thesis committee or a DBO exam, or act as a secondary advisor if their credentials are approved by the program director.

Course Requirements

Students will take at least 18 credit hours of course work in the life sciences. Courses in molecular, cellular and systems biology are required. The requirement may be met by taking a subset of the first year medical school basic sciences curriculum (described below). It may also be met by taking the alternative life sciences curricula, also as sketched below. In either case, courses in Quantitative Biology (listed below) may be used in part to meet this requirement.

Students must also take a minimum of 18 credit hours of elective course work in mathematics/applied mathematics, engineering and/or quantitative biology. These electives must be at the 400 level or higher, with at least 2 electives at the 600/700 level. Of these 2 electives, at least 1 must have substantial theory content in engineering, mathematics or computer science. Electives of general value to all research areas are listed below. Students may choose from these and other electives to fulfill the general BME Ph.D. Program requirements. It is important that when a student considers taking a course outside of this list they consult with the BME PHD office as to whether it fulfills requirements for graduation. Seminar courses generally do not count toward graduation requirements.

For a course to apply toward graduation, a grade of B- or higher is required. If a grade lower than B- is received, then that course must be repeated. If it is not possible to repeat the course, then an alternate course may be taken but must be approved by the Program Director.

Faculty advisors may strongly advise that students choose specific electives and/or specific numbers of electives of particular importance to each of the research and training areas. In such cases, this additional course work is not a requirement of the BME PhD Program.

All PhD candidates in the School of Medicine are required to take a course in the responsible conduct of research.

Assignment of credit hours to the courses in the School of Medicine. Because courses in the School of Medicine typically do not carry specific credit hours, we use the following formula: one credit hour is assigned to the course for each 13 hours of lecture or lab.

First Year Basic Sciences Curriculum of the School of Medicine

The School of Medicine 1st year basic science curriculum consists of courses that meet every day, 8AM to 1PM or 3PM. The dates below are for the 2012-2013 school year.

Fall: Scientific Foundations of Medicine (SFM)

8/27 – 10/15 SFM 1: Anatomy, 35 days (12 credits)
10/16 – 11/28 SFM 2: Macromolecules, cell physiology, metabolism, and genetics, 30 days (13 credits)
11/30 – 12/10 SFM 3: Pharmacology and pathobiology, 7 days (2 credits)

Winter: Genes to Society (GTS)

1/2 – 1/18 GTS 1: Immunology I, 13 days (5 credits)
1/22 – 2/18 GTS 2: Micro/Infectious disease, 20 days (8 credits)
2/25 – 2/27 GTS 3: Dermatology, 3 days, (1 credits)
2/28 – 3/22 GTS 4: Hematology/Oncology, 17 days (7 credits)
4/1 – 4/8 GTS 5: Neuroanatomy, 6 days (2 credits)
4/9 – 4/24 GTS 6: Brain/Mind/Behavior, 12 days (5 credits)
4/25 – 6/10 GTS 7: Nervous systems and special senses, 27 days (11 credits)
Physiology - Organ systems (recommended for cardiovascular focus) (7 credits) offered by Departments of Physiology and BME

Alternate Life Sciences Tracks

Alternate Track 1

Two of the following (each 4 credits):

580.421 Systems Bioengineering I (cardiovascular)
580.422 Systems Bioengineering II (neuroscience)
580.423 Systems Bioengineering III (systems biology)
and 1-2 courses from Quantitative Biology Electives

Alternate Track 2

440.811 Neuroscience Cognition I (5 credits)
440.812 Neuroscience Cognition II (7 credits)
and 1-2 courses from Quantitative Biology Electives

Alternate Track 3

Biochemistry, Cell and Molecular Biology Core:

100.709 Macromolecular Structure and Analysis (1 credits)
100.710 Biochemical and Biophysical Principles (1.5 credits)
260.708 Genetics (1.5 credits)
260.709 Molecular Biology and Genomics (1.5 credits)
330.709 Organic Mechanisms in Biology (3 credits)
360.728 Pathways and Regulation (1 credit)
110.728 Cell Structure and Dynamics (1 credit)
800.707 Bioinformatics (1 credit)
and 1-2 courses from Quantitative Biology Electives

Quantitative Biology Electives

540.409 Modeling Dynamics and Control for Chemical and Biological Systems
580.460 Physiological Fluid Mechanics
520.610 Computational Functional Genomics
580.625 Ion Channels
580.630 Theoretical Neuroscience
580.635 Bioelectromagnetic Phenomena
520.636 Feedback Control in Biological Signaling Pathways
580.639 Models of Neuron
580.682 Computational Models of the Cardiac Myocyte
580.687 Foundations of Computational Biology I
580.688 Foundations of Computational Biology and Bioinformatics II
580.690 Systems Biology of Cell Regulation
580.691 Learning Theory

Mathematics/Applied Mathematics Electives

110.405 Analysis
580.691 Learning Theory
110.607 Complex Variables
550.426 Introduction to Stochastic Processes
550.430 Introduction to Statistics
550.437 Statistics Information and Vision
550.471 Combinatorial Analysis
550.491 Applied Analysis for Engineers and Scientists
550.620 Probability Theory I
550.621 Probability Theory II
550.626 Stochastic Processes II
550.630 Statistical Theory
550.631 Statistical Inference
550.632 Multivariate Statistical Inference

550.672 Graph Theory
550.692 Matrix Analysis and Linear Algebra
550.723 Markov Chains

Engineering Courses with Substantial Theory Content

520.447 Introduction to Information Theory and Coding
580.691 Learning Theory
520.601 Introduction to Linear Dynamical Systems
520.621 Nonlinear System Theory
520.651 Random Signals
530.659 Applied Analysis for Engineers and Scientists
530.661 Applied Mathematics for Engineering
530.730 Finite Element Methods
530.761 Mathematical Methods of Engineering I
530.762 Mathematical Methods of Engineering II
530.766 Introduction to Numerical Methods
540.651 Advanced Transport Phenomena

Fellowships

There are number of fellowships that are available to graduate students. In their first and second year in the BME PhD, most graduate students are eligible to apply for an [NSF fellowship](#) (deadline is November annually). After completion of the Thesis Proposal, most students are eligible to apply for an [NRSA fellowship](#) from the NIH (deadlines are in April, June, and December annually). Before the final year of the thesis research, all BME PhD students are eligible to apply for a Siebel fellowship. There are other fellowships that are also available (American Heart Association, etc.).

If students win external fellowships while they are in their thesis research period, per School of Medicine policy they receive an additional \$3000 bonus. This bonus is paid by the thesis mentor in lieu of the monthly stipend charges that are usually paid by the mentor (and are now covered by the fellowship). The Siebel fellowship is a one-time prize of \$35,000 that is paid directly to the student and does not include the additional \$3000 bonus.

Siebel Scholars Program

In the May of each year, request for nominations for the Siebel Scholars is sent to the faculty mentors of all BME PHD students. The dates below are for the May 2012 nomination process.

This is a program by the Siebel Foundation to recognize graduate students who have demonstrated the highest levels of academic achievement and leadership. Johns Hopkins is one of 5 universities in the nation that have been selected for this program. Last year's winners are [here](#). The Siebel Scholarship is based solely upon academic achievement and excellence, and is not need-based financial aid. It is a \$35,000 prize paid directly to the student, and is independent of the usual stipend that they receive.

The nominees must meet all of the following criteria at the time of selection: Nominee ranks within the top 10% of their Biomedical Engineering School class based on academic results. Nominee demonstrates excellence, in terms of leadership qualities, in the Bioengineering or Biomedical School community and in experience prior to

graduate program. Nominee has a track record of distinguished research (published papers). Nominee has completed at least one year at Johns Hopkins and is expected to complete the master's or doctoral degree between November 2012 and October 2013. (Ideally, the student would be completing the degree towards the end of the Spring 2013 semester or during the following summer.) Therefore, the application process starts 6-12 months before expected completion of thesis research.

Teaching

Students are required to serve as a teaching assistant (TA) in two BME courses. One of the courses is generally a 'core BME' course, such as Systems BioEngineering (SBE). Simultaneously taking a course for credit and TAing that course is not allowed.

The students are encouraged to teach a course during the University Intersession or during the summer in lieu of one of the two TA course requirements. If the student elects to teach a course in lieu of TAing, the course syllabus must be submitted to the Program Director at least one month before the start of the Intersession. The student may be asked to present a sample lecture. The course must be approved by the Program Director if it is to be used in lieu of TAing.

Doctor of Philosophy Board Oral Examination

Purpose

The Doctor of Philosophy Board Oral Examination for candidates for the Ph.D. degree has three major objectives:

1. To assess a candidate's proficiency in the discipline.
2. To give a student the benefit of a critical examination of his or her work by scholars outside the department or program.
3. To provide a means for extra-departmental monitoring of the academic quality of departments and programs sponsoring candidates.

Types of Doctor of Philosophy Board Oral Examinations

There are two types of Doctor of Philosophy Board Oral Examinations: preliminary exams and final exams. Students in the BME PHD program will use the preliminary examination to fulfill their Doctor of Philosophy Board requirement. Preliminary exams are given to students at an early stage in the progress toward the Ph.D. (typically at the end of the 2nd year).

Preliminary Examination

The purpose of a preliminary examination for students in the BME PHD program is to test the depth and breadth of the student's knowledge and reasoning abilities. The scope of such an examination cannot and should not be sharply defined. The Doctor of Philosophy Board Oral Examination Committee can determine the limits of the exam by reviewing the candidate's formal coursework along with the requirements of the candidate's school, group, department, or program requirements (e.g., whether specific minor, as well as major, subjects are to be included). The preliminary exam generally covers course work that the student has completed, and is not an examination that covers proposed research.

Final Examination

Final Examinations are not administered to students in the BME PHD program. In other JHU PHD programs, a final examination concentrates on the student's doctoral dissertation and its implications.

When to take the examination

It is expected that the BME PHD students take the exam near the end of their 2nd year, at a time when most course work has been completed. Students who come into the program after completing an MS degree typically complete the examination at end of their 1st year.

Scheduling the Doctor of Philosophy Board Oral Examination (DBO)

The process begins by the graduate student proposing to the Program Director a list of Oral Examination Committee Members. Upon approval of the list, the student contacts the members and schedules an examination date and time. Once the date is scheduled, the date must be submitted to the Program Administrator at least one month prior to the scheduled exam date. This is a firm requirement set by the Graduate Board. If the date is not submitted one month in advance, the Graduate Board will not approve the exam.

Once the date has been submitted to the Program Administrator, the Program Administrator submits the form entitled *Oral Examination for the Ph.D. Degree for School of Medicine Programs* to the School of Medicine Registrar's Office. Exams may be conducted at any time throughout the year.

Oral Examination Committee Eligibility

To be eligible to serve on a Doctor of Philosophy Board Oral Examination Committee, a faculty member must hold:

- A faculty appointment as a Professor, Associate Professor, or Assistant Professor in a University department/program. Such appointments may be regular or visiting, full-time or part-time.
- Exceptions. The Associate Dean for Graduate Students must approve anyone not meeting these criteria. To be considered for approval, the chair of the program petitioning for authorization of an examiner outside of the University must submit:
 - The full curriculum vita of the outside examiner, including recent peer-reviewed publications and evidence of scholarly work
 - A one-page summary of the research of the Ph.D. student
 - A one-page letter explaining how the expertise of the examiner meshes with the student's research and why the department must go outside of the University to have this expertise represented on the committee.

The above request and documentation should be submitted to the Associate Dean for Graduate Students for approval a minimum of four weeks before the scheduled Doctoral Board Oral Examination. Written approval from the Associate Dean for Graduate Students and all documentation should then be submitted to the Registrar's Office, along with the exam committee form for final approval.

At the discretion of the program, faculty members who leave the University may continue to mentor their former students for a period of five years with the approval of the chair of the department/program and serve on the oral exam committee.

Composition of the Oral Examination Committee

The composition of the Oral Exam Committee should be a balance of faculty with expertise in the mathematical and biological sciences. This balance should be such that the student is examined in both mathematical and biological sciences.

Members of the DBO examination committee are approved by the Associate Dean/Registrar. The chair of the committee is selected by the Associate Dean/Registrar, based on rank and seniority at rank. Only JHU full-time tenure track faculty, holding the rank of Professor, Associate Professor, or Emeritus Professor, from outside the candidate's department are eligible to serve as Chair of the DBO committee.

Although consultation between the student and his or her faculty advisors regarding possible exam committee members is appropriate, final selection of committee members is the responsibility of the Program Director.

Inside and Outside Examiners

A minimum of 2 committee members must be from inside the BME department, and a minimum of 2 committee members must be from outside the BME department. The fifth committee member may be inside or outside BME. The primary or secondary departmental appointment of a faculty member will generally determine whether he or she is considered inside or outside the department, except that advisors are considered inside examiners even if their appointment is outside of the BME department. An alternate is selected for the inside member, and a second alternate is selected for the outside member. These alternates will be called upon in case one of the regular members of the committee is not able to serve at the day of the examination.

Notification of Committee Members

After the Associate Dean/Registrar approves the examination request, the original request form will be sent to the program administrator, who will forward the form and examination instructions to the Committee Chair. The Associate Dean/Registrar will maintain one copy. After this point, no substitution of examiners other than those named as alternates can be made without the approval of the Associate Dean/Registrar. The chair or program administrator of the program sponsoring the candidate is responsible for notifying the student and examiners of the time and place of the examination.

Length of the Exam

The examination should be long enough for the committee to learn as much as it needs to judge the student's qualifications as a Ph.D. candidate. Ordinarily, examinations should be under two hours, but committees are free to set their own time limits.

Oral Examination Procedures

The chair of the examination committee will begin the meeting by introducing the committee members. At this time the candidate will be asked to leave the examination room. The faculty advisor will make a brief introduction of the candidate. The committee members may review the candidate's formal course record at this time. At this time the candidate re-enters the examination room and the exam commences. The candidate is not expected to provide a presentation of their research. Typically each committee member will conduct a 15 minute question session.

At the conclusion of the examination, after a vote has been taken, the chair of the examination committee should record the results of the examination and have each committee member sign the form. The chair should also sign the form and fill in the date. The completed form must be given to the candidate's program administrator directly following the examination. In no case should the form be given directly to the student.

The program administrator is responsible for sending the original form to the Registrar's Office within one week of the exam date.

- **If the candidate receives an unconditional pass** (e.g., a majority of favorable votes), the examination committee is discharged.
- **If the candidate receives a conditional pass**, the exact terms of the condition are to be reported on the examination form – i.e., what course(s), if any, need be taken; in what time frame the conditions(s) should be met; and any other pertinent information that will point out clearly to both the student and faculty how to satisfy the condition(s). As soon as all conditions have been met, the chair of the examination committee must write a letter to the Associate Dean of the Registrar of the School of Medicine informing them that the condition has been removed. A copy of this letter must also be sent to the Program Director and the Program Administrator. The committee is then discharged.
- **If the candidate fails**, the examination committee, through the chair, should recommend a course of further action:
 - No further examination.
 - Re-examine the candidate by the same committee at a later date. The candidate must receive a Pass or Conditional Pass on the second attempt. A second failure will lead to dismissal.
 - Re-examine the candidate by a different committee at a later date. Reasons should be given for the change in the committee membership. The newly formed committee must have representation from the previous committee. The candidate must receive a Pass or Conditional Pass on the second attempt. A second failure will lead to dismissal.

The committee may recommend whatever action in its judgment seems desirable, taking into consideration the background of the student, previous performance, potential, and reaction to oral questioning. The Doctor of Philosophy Board will be guided by these recommendations, but will assume responsibility for whatever action is taken.

Duties of the Chair of the Doctor of Philosophy Board Oral Examination Committee

The duties of the chair of the examination committee are to:

- Preside at the examination.
- Instruct the committee as to the scope, character, and conduct of the examination before questioning begins.
- Allot time to inside and outside examiners.
- Report the results of the examination to the program administrator immediately after the examination, using the original examination form. The program administrator must send the signed original to the Registrar's office within one week of the exam date.
- In the case of a conditional pass or failure, to monitor the further action recommended.

Reports and Records of Oral Examinations

Immediately after the examination, the chair of the examination committee should tell the candidate in person whether he or she passed or failed the examination, or received a conditional pass.

The advisor/departmental representative serving on the examination committee should report the results of the student's examination to the department/program chair.

Should a student fail or receive a conditional pass, the Associate Dean/Registrar will formally notify the program director in writing.

The Registrar's Office enters results of each examination into the student's official record.

Thesis Advisory Committee

The Thesis Advisory Committee is intended to assist the student and provide critical review of progress, methods, etc. The Committee meets periodically to assess the student's progress, evaluate the research plan for the coming period, and provide constructive criticism for the student and his or her supervisor. These meetings also provide an opportunity for the committee to advise students on their career development, and to assess progress of the student by faculty who are independent of the thesis supervisor.

The Committee consists of the thesis supervisor and at least two other faculty members chosen jointly by the student and supervisor. At least one member must have a primary appointment in the BME Department. The members should be selected for their expertise and willingness to advise the student and their thesis supervisor throughout the duration of the thesis research. The most senior member of the committee (other than the mentor) serves as the "chair", and should fill out the required information on the thesis committee report form after discussion with the committee. If one or more members of the committee are not able to physically attend a meeting, they may participate in the meeting using tele-conferencing.

The Thesis Advisory Committee's first milestone is to meet and approve the student's thesis proposal. After this step has been completed, the committee then meets annually unless there is some indication that more frequent meetings would be useful. Thesis committee meetings should be scheduled for Friday afternoons (if possible), and should begin with a student presentation of scientific progress. This portion of the meeting is open to the Hopkins community. The presentation is then followed by closed-door deliberations. The Program Administrator must be informed of the date and time of the Thesis Advisory Committee meeting, along with a title of the presentation, so that the information can be shared with the Hopkins community. For post-DBO students, advisory meetings must be completed at least once per year (this clock starts from time of passing of DBO) to remain in good standing.

At least one week before each meeting of the Thesis Advisory Committee the student must provide each member with a written statement, 2-3 pages in length, of his or her progress during the preceding year and plans for the following year. The thesis proposal must be provided to each committee member at least 2 weeks in advance of that meeting. Each member of the committee should also receive a copy of the previous committee report. Without timely delivery of these documents, the meeting cannot proceed in a productive manner. At the beginning of the closed-door segment of the meeting, the committee may wish to ask the student to step out of the room so it can consider its response to the thesis proposal or student report and the most appropriate way to proceed in its discussion with the student.

After each meeting of the Thesis Advisory Committee, including the thesis proposal meeting, the chair of the Thesis Advisory Committee submits a report to Program Administrator (this form is enclosed at the end of this document). The report should summarize the student's progress and the results of the committee meeting. Copies of that letter are distributed to the members of the Advisory Committee and to the student. This report is placed in the student's file.

Meeting #1: Evaluate plan for development of thesis proposal. A list of the faculty who have agreed to be on the Thesis Advisory Committee, together with the scheduled date and time of the first meeting must be submitted to the Program Administrator within 6 months of passing the DBO exam. The goal of this first meeting is to discuss the scope of the thesis in an outline form, review background literature, review preliminary experimental results, and lay plans for formulating the thesis proposal.

Meeting #2: Evaluate and approve the thesis proposal. This meeting should take place within 12 months of passing the DBO exam.

Meeting #3: Evaluate progress during previous year. This meeting should take place within 12 months of meeting #2.

Year 6+: After completion of 6 years, the Thesis Advisory Committee should meet twice per year to more closely be involved in the progress of the students and help address issues that may be affecting the student's ability to complete their thesis.

Note that the Thesis Proposal (next section) can be held at the 1st or 2nd Thesis Committee Meeting; the thesis proposal meeting should be held within 12 months post DBO, and must be completed by the end of the Student's fourth year, though many students benefit from an earlier thesis proposal, for two reasons: (1) feedback for submission of NRSA and other fellowship applications; (2) earlier focusing of research.

Committee Membership

The thesis committee may be as small as 3 faculty members, including the thesis advisor. At least one member must have a primary appointment in the BME Department. A minimum of 3 faculty members are required to approve the thesis proposal, sign the thesis committee meeting reports, and be present during the thesis committee meetings (either physically or via tele-conferencing). A minimum of 3 faculty members are required to approve the dissertation.

Thesis Proposal

The thesis proposal format is the same as an NIH Pre-doctoral Fellowship (NRSA) application. This proposal should be well-formulated and presented in sufficient detail that it can be evaluated for both its research training potential and scientific merit. It is important that it be developed in collaboration with the thesis advisor, but it is to be written by the applicant.

Include sufficient information to permit an effective review without reviewers having to refer to the literature or any previous application. Brevity and clarity in the presentation will be considered indicative of an applicant's approach and ability to conduct a superior project. Subsections (3) and (4) of this item are not to exceed 6 single-spaced pages in total, including all tables and figures. The document has minimum margins of 0.5 inches and a minimum font size of 11. Follow the format below:

1. Title Page (one page). Title, Author, Names of Committee Members, plus: two-sentence summary of Public Health Significance; and two-sentence summary of Proposed Research.
2. Specific Aims (one page). State the specific purposes of the research proposal and the hypotheses to be tested.
3. Background and Significance. Sketch briefly the background to the proposal. State concisely the importance of the research described in this application by relating the specific aims to broad, long-term objectives. Use this section to provide an account of any preliminary studies that might demonstrate the utility of the proposed project as a training experience.
4. Research Design and Methods. Provide an outline of: Research design and the procedures to be used to accomplish the specific aims; Tentative sequence for the investigation; Statistical procedures by which

the data will be analyzed. Potential experimental difficulties should be discussed together with alternative approaches that could achieve the desired aims.

5. Literature cited.
6. NIH-style biosketch.
7. Path to graduation (one page). Estimate of time remaining to graduation, annotated with work to be done including: milestones; classes, training or travel to be undertaken; anticipated manuscript and grant/fellowship submission. This one-page overview should be updated and distributed at subsequent thesis committee meetings.

The proposal must be distributed to members of the Thesis Advisory Committee at least two weeks before the Thesis Proposal meeting. The members of the Thesis Advisory Committee will provide written feedback to the student before the Thesis Proposal. The student then presents the proposal orally to the committee. Three of the Thesis Advisory Committee members must be in attendance (or via tele-conferencing). The oral presentation by the student is 25 minutes, followed by a brief period of questions from the public, followed by closed-door committee questions and discussion. The committee discusses the proposal with the student and can accept or reject it.

Dissertation Requirements and Graduation

Thesis research must be a significant contribution to knowledge and be worthy of publication in its present form. Acceptance the thesis research is in partial fulfillment of the requirements of the degree of Doctor of Philosophy.

There are a series of requirements for graduation that must be performed in a particular sequence as described below. The university confers degrees twice per year, once in May and once in December. However, the Commencement ceremony is only held in May. In order to graduate in May of a given year, there are certain deadlines and intervals for these steps. It should be understood that if the graduation deadline is not met for a given calendar year that this does not obligate the student to remain in the program. Once the requirements for graduation have been met, the Registrar's office can issue a letter attesting to this fact which will then be sufficient to allow students to begin postdoctoral fellowships, employment, residencies, etc. MD/PhD students returning to the clinic must schedule a research defense at least 3 months prior to returning to the clinic, and must complete all degree requirements including submission of the approved dissertation to the Graduate Board and the Thesis Seminar prior to returning to the clinic.

The Research Defense

The purpose of this meeting is twofold. First, the Thesis Advisory Committee will seek to determine whether the student has conducted research that is appropriate to provide the basis for a dissertation. Second, the Thesis Advisory Committee will test the student on their knowledge of the literature and broader issues related to their thesis topic. In addition to presenting their data, students should be prepared to discuss the background and history of the problem addressed in their thesis work, details of the techniques used, implications and limitations of their findings and future research directions. If all members of the Committee are satisfied on all of these points, then permission will be given to begin writing the Dissertation. This fact is indicated in the Record of Annual Thesis Committee Meeting form. If they are not, then specific instructions will be given on the problems to be addressed in a subsequent Research Defense meeting. These may involve additional experiments, reanalysis of data, and study of the literature.

The timing of this meeting is critical. For all students, the Research Defense meeting must be scheduled a minimum of one month before submission of the written Dissertation. For graduation in May of the same calendar year this will be January 31. There will be no exceptions made to this deadline.

The Dissertation Defense

The Dissertation should be prepared in consultation with the thesis advisor. It should begin with a general Introduction, which summarizes the history of the general area and the problem. A General Methods section should be used to describe those methods that are common to the various experiments. Following the chapters which present and discuss the various experimental results, there should be a general Discussion which addressed the implications and limitations of these findings, sets them within the context of related work in the literature and points to some future directions.

The Dissertation must be submitted to the Thesis Advisory Committee in complete form with all figures. It should represent what the student believes to be a complete and final document. The dissertation must be submitted at least two weeks before The Dissertation Defense and three weeks before the Submission of the Approved Dissertation and Related Forms (see below). For graduation in May of the same calendar year this will be March 22nd. There will be no exceptions made to this deadline.

The purpose of the Dissertation Defense is two folds: 1) The Thesis Advisory Committee will determine whether the written dissertation is appropriate for submission to the Graduate Board. This meeting will focus upon the content, style, clarity and completeness of the written document. If the Dissertation is not approved at this meeting, specific instructions will be given on the point that must be addressed to render it acceptable. The Dissertation must be approved by all members of the Thesis Advisory Committee. While all members of the committee must sign a document approving the dissertation, two (the Thesis Advisor and one other of the student's choice) are designated as Readers to provide particularly detailed feedback. 2) The student will present the research results to the Hopkins community, friends, and family. The Defense is open to the public, and is a celebration of completion of the PHD years.

The Dissertation Defense meeting must be scheduled at least one week before the Submission of the Approved Dissertation and Related Forms. For graduation in May of the same calendar year the latest date for the submission of Approved Dissertation and Related Forms is March 22nd.

In addition, there is a maximum period of 6 months between the successful Research Defense and the approval of the thesis by a successful Dissertation Defense. If the Dissertation has not been approved by the Thesis Committee within this time frame then the student will be placed on leave of absence without pay. A waiver to this deadline requires the approval of both the student's thesis advisor and the chair of the Thesis Committee.

Submission of the Approved Dissertation and Related Forms

The following documents must be delivered to Program Administrator by March 22nd for graduation in May of the same calendar year.

- One complete copy of your thesis with your CV appended.
- Letters from both of your readers approving the Dissertation in its present form (can be one letter from your advisor including the signature of your second reader)
- The Graduate Student Clearance Form

The following information regarding the Commercial Binding Office applies only until September 1, 2013. On that date and beyond, dissertations will be via an electronic form and no longer printed on paper.

The Commercial Binding Office Requires:

- One copy of your thesis with original figures printed on acid free paper (obtain at Medical Bookstore) with two extra title pages and two extra abstract pages.
- One copy of your thesis on regular bond paper, with original figures. If you want any additional copies bound, you should take those on bond paper. (Before you deliver your copies to the binders office, see the Program Administrator and he/she will give you an M&S form, that will have a budget number on it to pay for these 2 copies.) If you wish to have additional copies bound for yourself or your advisor, you will be asked to pay for them when you drop them off. The Commercial Binding Office is located on the Homewood Campus in the Milton S. Eisenhower Library, Level A.
- The Doctoral Dissertation Agreement form (You can get this from the Commercial Binding Office.)

Summary of important dates for graduation in May:

- January 31 - Research Defense meeting. (Must occur at least 2 months prior to the date that you submit your approved thesis to the Graduate Board).
- March 1 - Submission of written dissertation to your advisory committee (this must occur at least 2 weeks prior to your dissertation defense and at least 3 weeks prior to the date that you submit your approved thesis to the Graduate Board).
- March 15 - Dissertation Defense.
- March 22 - Submission of approved Dissertation and related forms to the Graduate Board.

Graduate Student Hours/Time Off/Vacation/Sick Leave Policy

Hours of work: Students are expected to be in the lab, doing thesis research at a minimum, 40 hours per week, during normal business hours. The standard workday is 9:00 a.m. – 5:30 p.m. In order to meet the needs of both the thesis supervisor and student, arrangement of an alternative work schedule is left to the discretion of the thesis supervisor (i.e. experiments during non-business hours, studying for GBO, preparing for meeting).

Vacations and holidays. In accordance with the School of Medicine Policy, Graduate students receive 2 weeks of vacation during the first year beyond the official University holidays and breaks. In the 2nd and subsequent years, students receive 3 weeks of vacation. Additional time off may be granted by the thesis advisor and program director. Vacation is not accrued and may not be carried over to the next year and will not be paid to students that graduate or leave the program.

Sick leave and other leave. Graduate students may take up to 15 calendar days of sick leave per year which can be applied to pregnancy/childbirth. Under exceptional circumstances, this period may be extended by the training program director and the advisor. Sick leave is not accrued. For medical leave of absence, health insurance will be paid for by the advisor for up to one year if requested by the student. For an extended sick leave the student must submit a written request from his/her doctor to the thesis advisor and program director detailing the illness, and expected date of recovery. Sick leave may be used for medical conditions related to pregnancy and childbirth.

Parental leave. Graduate students may receive paid parental leave for up to 30 calendar days per year for the adoption or the birth of a child. Either parent is eligible for parental leave. The use of parental leave requires approval by the thesis advisor and the program director.

Terminal leave. A period of terminal leave is not permitted, and payment may not be made from grant funds for leave not taken.

Unpaid leave. Graduate students requiring extended periods of time away from their research training, that is, more than 15 calendar days of sick leave or more than 30 calendar days of parental leave, must seek approval for an unpaid leave of absence. Approval for a leave of absence must be requested in advance from the Thesis Advisor and Program Director. If the unpaid leave is not medical related, health insurance will still remain in effect, but will be paid by the student.

Outside counseling. If you are having personnel troubles or are having vocational concerns we encourage you to seek help through the Johns Hopkins counseling center. www.jhu.edu/counselingcenter.

Electronic Dissertations

Publication of a dissertation is a requirement for the Ph.D. degree. Traditionally, publication has been accomplished by depositing a copy of the dissertation in the university library, and then sending a copy for microfilming by ProQuest, an independent publisher. This is the model still used at many universities across the country. The digital revolution is changing traditional models of scholarly communication. Internet technology allows easy and widespread distribution of information. It permits immediate dissemination of a scholar's work, but it also increases the risk of unwanted and unauthorized disclosure. This document outlines a set of principles to underlie the electronic publication of Ph.D. dissertations at Johns Hopkins. The principles balance the intellectual property rights of students against the mission of the University – to produce knowledge for the world. They fit the decentralized culture of Johns Hopkins.

Starting September 1, 2013, students will be required to deposit an electronic copy of their dissertation in the University repository. Instead of bringing paper copies of the thesis or dissertation to the library, you will submit a PDF via a special JHU electronic thesis or dissertation (ETD) web portal. You will login to the portal using your JHED ID, enter some contact information about yourself, enter some information about the dissertation (title, keywords, abstract, etc.), and upload the PDF. The library will do some brief format checking and then approve the submission or email you about necessary changes. The ETD will not be visible to the public at this point.

At the end of each semester, the library will make the ETD available to researchers around the world via a digital repository. Your research can make an immediate impact in your field. In rare cases, you may need to delay public access to your dissertation because of patent concerns or a pending publication derived from your dissertation. In such circumstances, you will be allowed to embargo your dissertation for a period of up to four years. In most cases the embargo will be short, if at all. Extensions beyond four years may only be granted by your school's graduate academic board.

In addition to distributing the ETD through the JHU repository, you have the option to make your ETD available through the [ProQuest Dissertations & Theses](#) database. The web site library.jhu.edu had guides available on ETD.

- **Copyright.** It is the considered legal opinion of the General Counsel's Office that faculty and students must obey copyright law, and in particular, that dissertations should respect copyright. This implies that students must seek permission to include in their dissertations intellectual property that belongs to others. The dissertation is a scholarly work, so scholarly standards of attribution and credit should apply. The dissertation is a stand-alone document that represents the culmination of a student's Ph.D. studies. Every effort must be made to secure permissions for copyrighted material. If that is not possible, an exception maybe claimed under the "fair use doctrine." The Library and the General Counsel will develop a guide to help students and advisors understand what constitutes fair use, and what does not. An electronic copy of a student's dissertation will be made available to Library patrons and to the Johns Hopkins community for scholarly purposes. This will be the definitive version of the dissertation. A second copy will be made freely available over the internet through the Library's electronic repository. The Library will arrange for a click-box to indicate that the dissertation is to be used for scholarly purposes only. In general, the two versions of the dissertation will be identical. In the rare case that copyright permissions cannot be secured, or that the use of copyrighted material is so extensive that fair use cannot be claimed, the public version may appear without the copyrighted material, or with the material appropriately altered. When that occurs, the public version must indicate where the changes were made. Students are encouraged to copyright their dissertation for their own protection.
- **Dissemination.** With rare exceptions, the electronic dissertations must be available without restriction through the University repository. However, there are occasionally legitimate reasons to withhold dissemination for a finite period of time. These include patent and other intellectual property concerns, as well as issues pertaining to later publication of a book derived from the dissertation. For these reasons, a student should be allowed to embargo his or her dissertation for a fixed period of time: either zero, one, two, three or four years. The default is to have no embargo. The Board expects that in most cases the embargo period will be short, if indeed there is an embargo. At the end of four years, the student could petition his or her school's appropriate graduate academic board to extend the embargo. The Ph.D. Board believes that a high bar should be set for such extensions. The Board requests that each school prepare a report describing the extensions it has granted at the conclusion of each academic year. An embargo should never be available to a student whose dissertation contains plagiarized material.
- **ProQuest.** ProQuest offers the student an opportunity to publish his or her dissertation via its services. ProQuest then pays the student royalties for the work. ProQuest also maintains a database of all dissertations produced nationwide. The database is a valuable tool for scholars in certain disciplines. The ProQuest publication agreement must be read carefully. For example, ProQuest reserves rights to repackage and resell dissertations under their control, which some students find objectionable. Moreover, in the library community, there is increasing resistance to a business model in which universities give intellectual property to organizations like ProQuest, and then have to buy it back each year through subscriptions. For all these reasons, going forward, ProQuest participation will be *optional* for JHU students. For some students, ProQuest adds value, so those students should be free to participate. But for other students, ProQuest represents an obstacle that should be removed. The ProQuest database, though, offers value to the academic community because it contains a record of all U.S. dissertations. Therefore the Ph.D. Board requests that the Library continue to send all dissertation metadata (author, title, abstract) to Proquest for inclusion in their database.

Dismissal Procedures from the BME PHD program

Students who are in the pre-DBO phase

The DBO examination is expected to be taken by the end of the second year of matriculation, and in no case later than 30 months after matriculation. During the pre-DBO period the graduate student is expected to make significant progress toward completion of the course requirements and selection of a thesis laboratory. Significant progress in completion of courses is defined as completion of at least 70% of the total course credit requirements for graduation with a mark of B- or higher by the end of the second year. If the graduate student does not meet this requirement, he/she will be placed on probation. The BME PHD Program Director will state the reason for this probation in a letter to the student, indicating the courses requirements that the student must meet in the probationary period. The Program Director will evaluate the progress of the student at the end of the probationary period and will do one of three things: (a) remove the student from probation, (b) extend the probationary period, or (c) dismiss the student from the academic program. The student may appeal this decision in writing within five business days to the Department Director. The Department will continue funding the student during the appeal process, provided that the student continues with his/her duties.

Dismissal without Probation

A student may be dismissed without a formal probation period under two circumstances: (1) if he/she fails a DBO examination and the DBO committee determines that the student will not be allowed to re-take the exam; (2) if he/she fails a DBO examination, the DBO committee determines that the student will be allowed to re-take the exam but upon re-examination fails again; or (3) if he/she is expelled pursuant to allegations of misconduct.

Students who are in the post-DBO phase

The Thesis Committee and the student should hold meetings at a frequency of at least once a year. During this time the student presents his/her research results, and plans for conclusion of PhD. If the Thesis Committee determines that the graduate student has failed to meet minimum academic or research requirements, or that the research progress is inadequate, he/she may be placed on probation. This requires a formal letter to the student and the BME PHD Program Director providing an outline of the student's academic or research shortcomings, indicate the corrective measures necessary to remain in the program, and state the length of the student's probationary period.

Length of the Probation

If the probation is related to research progress and cannot be resolved with coursework, the probation period must span at least 8 work weeks before a final decision can be made. The Thesis Committee is at liberty to provide a longer probationary period.

Decision Process

The Thesis Committee must meet with the student at the end of the probationary period and inform the student and the BME PHD Program Director whether the student has met the requirements as stated in the probation letter. The recommendations of the Thesis Committee to the Program Director are as follows: (a) remove the student from probation, (b) extend the probationary period, or (c) dismiss the student from the academic program.

Dismissal Appeal Procedures

A student may appeal the dismissal within five business days to the Program Director with a letter stating why he/she feels this decision is unmerited. The program must render a decision on the appeal within five business days. The student may then appeal that decision within five business days to the BME Department Director with a letter stating why he/she feels this decision is unmerited. The Department will continue funding the graduate assistant during the appeal process, provided that the student continues with his/her duties.

Rights and responsibilities of PHD students

The following statements are university policy regarding Ph.D. students.

Ph.D. education is fundamental to the University's teaching and research mission. For an intellectual community of scholars to flourish, it is important to acknowledge the principles that underlie the compact between Ph.D. students, the faculty, and other members of the University community. It is in this spirit that the Doctor of Philosophy Board, in collaboration with faculty and students from across the University, has articulated a statement of rights and responsibilities for doctoral students at Johns Hopkins. The principles described in this document are to be realized in policies established by the various Schools of the University; the Schools will also develop mechanisms to monitor and enforce such policies.

RIGHTS

1. Ph.D. students have the right to education, supervision and training. This includes access to the classroom, laboratory and teaching opportunities necessary for completion of degree requirements, appropriate and regular faculty supervision consistent with the norms of the discipline, as well as appropriate research and/or clinical experiences.
2. Ph.D. students have the right to full and regular access to information about the requirements for the degree. This includes information regarding program requirements, assignment/selection/change of advisor, expected time to completion, graduation rates, and conditions of financial support.
3. Ph.D. students have the right to conditions of learning, teaching and research that are appropriate and reasonable for their discipline. This includes the right to information and ongoing consultation regarding their expected effort and specific duties, as well as clearly stated criteria for participation in collaborative work and/or research.
4. Ph.D. students have the right to be treated in a respectful and professional manner by all members of the University community. This includes freedom from discrimination and harassment as well as assurance of reasonable confidentiality in their communications, as governed by university policy.
5. Ph.D. students have the right to receive, on a regular basis, written evaluation of their progress and to be informed of the criteria upon which the evaluation is based. Students should also be provided with opportunities to discuss such evaluations with their advisor. Each program should make available their policies concerning academic probation, funding withdrawal, and dismissal; reasonable warning should be provided in advance of dismissal based on failure to make satisfactory academic progress.
6. Ph.D. students have the right to appropriate recognition for their contributions to research and scholarship. This will require discussion between the student, advisor and other relevant parties regarding expectations for student contributions and the nature of the recognition.
7. Ph.D. students have the right to academic freedom. This includes the right to express, without reprisal, independent opinions about scholarly issues (such as opinions regarding theoretical and methodological debates in their disciplines), opinions regarding matters of institutional policy, concerns about suspected research misconduct and personal opinions on public matters.

8. Ph.D. students have the right to have their views represented in the development of policies that govern the Ph.D. Student ideas and perspectives should be solicited and considered if substantive changes in the structure of a Ph.D. program are anticipated.
9. Ph.D. students have the right to clearly defined policies regarding benefits and nonacademic issues pertinent to their student status. These policies should cover (but not be limited to) such things as the provision of health care, recognition of family responsibilities, leave, vacation and other absences. These policies should acknowledge that students can, without reprisal, form clubs, associations or organizations around common interests, as long as these are consistent with general non-discrimination policies of the University.
10. Ph.D. students have the right to accessible procedures for redress of their grievances. Each School within the University must provide mechanisms to ensure that grievance procedures are fair and without reprisal. These procedures should include Ph.D. student representation, as appropriate.

RESPONSIBILITIES

1. Ph.D. students have the responsibility to inform themselves of the requirements of their programs.
2. Ph.D. students have the responsibility to dedicate appropriate effort and time to meeting the requirements of their programs.
3. Ph.D. students have the responsibility to uphold the ethical responsibilities of their profession and discipline. This includes honesty in academic coursework and scholarship, integrity in the use of grant and fellowship funds, and the upholding of ethical norms in the conduct and reporting of research methods and results.
4. Ph.D. students have the responsibility to treat all members of the University community in a respectful and professional manner.
5. Ph.D. students have the responsibility to contribute to the intellectual life of the University and to the advancement of education and scholarship.
6. Ph.D. students have the responsibility to understand and fulfill their role in developing and maintaining a professional relationship with their faculty advisor(s). This includes the responsibility for communicating regularly with advisors, maintaining a mutually agreed upon schedule of meetings, and informing advisors of such things as: the current status of their degree work; any expected deviations from the agreed upon program of studies; and any unanticipated absences.
7. Ph.D. students have the responsibility to recognize the contributions to their research and scholarly publications made by their advisors and other colleagues. This will require communication and consultation with these individuals about the nature of the recognition.
8. Ph.D. students have the responsibility to fulfill their teaching, research and/or clinical commitments and duties in a responsible manner. This includes the responsibility to inform themselves of the requirements of these positions, to maintain the established ethical standards of interaction with students, faculty, patients and/or research participants, and to respect the privacy of information shared with them.
9. Ph.D. students have the responsibility for the appropriate use of university resources and equipment.
10. Ph.D. Students have the responsibility to abide by the established rules and policies of their program, school and the University.

Name: Matriculation Year: Today's date:

Courses that you are taking or have completed

Course Title	Course No.	Grade	Comments
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Rotations

Please list all the labs that you have rotated through. Include start and end dates, name of advisor, the work that you did, whether you did any presentations, and the likelihood of choosing the lab for your dissertation.

Research Ethics Courses Completed

Session1: Session 2: (or) Core:

External Fellowship (when you applied and name of the fellowship)

List the presentations that you have given in the past year

List 3 seminars that you attended or papers that you have read in the past year

List your academic/scientific goals for the coming year

Would you like to have a meeting with program directors or administrator?

Other comments:

Name: Matriculation Year: Today's date:

Name of advisor:

Courses that you are taking or have completed

Course Title	Course No.	Grade	Comments
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Research Ethics Courses Completed

Session1: Session 2: (or) Core:

Doctoral Board Oral Exam

If you have taken your DBO, list the date, and the exam results.

List your academic and scientific achievements for the past year

List your academic and scientific goals for the next year

List your publications since matriculation

External Fellowship or awards (when you applied and name of the fellowship/award)

List the presentations that you have given in the past year

List 3 seminars that you attended or papers that you have read in the past year

Would you like to have a meeting with program directors or administrator?

Other comments:

Name: Matriculation Year: Today's date:

Name of advisor:

Doctoral Board Oral Exam

List the date of your DBO, and the exam results.

Thesis Committee

List the members of your thesis committee, the date of the last meeting, and planned date for the next meeting. Include the date of your thesis proposal meeting (or planned date), date of research defense meeting (or planned date), and date of dissertation defense meeting (or planned date).

List your academic and scientific achievements for the past year

List your academic and scientific goals for the next year

External Fellowship or Awards (when you applied and name of the fellowship/award)

List your publications since matriculation

List the presentations that you have given in the past year

List 3 seminars that you attended or papers that you have read in the past year

Would you like to have a meeting with program directors or administrator?

Other comments:

Laboratory Rotation Agreement

We require that our PhD students identify a mentor by the end of their first year in the Program, with the understanding that the mentor will support the student fully until the student has successfully defended his/her dissertation. The student's rotation is an exploratory time to determine whether or not there is an intellectual fit between the student and the mentor. If there is mutual agreement between the student and the mentor that there is a good fit, we will need a confirmation from the mentor that there is adequate funding in the lab to meet what is typically four to five years of support for the student. For your information, for academic year 12-13 the stipend is \$28,645, and the health and dental insurance premiums total \$3,666. In addition each mentor provides annual support for the overhead of the Program. Overhead costs include salaries and benefits for 1.5 staff members, stipends for students doing rotations in their first year, recruitment costs to bring students to Baltimore for interviews and activity costs for the Program during the year. This year that cost is \$2,100. The overhead cost cannot be charged to most grants, including federal grants. It must, therefore, come from discretionary funds. In subsequent years we expect a modest increase in all categories of student and Program support. If a mentor loses funding unexpectedly we expect the home department of the mentor to provide the funding.

Our program encourages and helps students to apply for and acquire external fellowship. When a student is successful, their fellowship relieves a substantial financial responsibility from the lab. Since 2006, the SOM policy states that the lab mentor will provide the student who has won such a fellowship a one-time bonus of \$3000. This is mainly to encourage the students to compete for the fellowships.

Rotation Start date: _____ **End date (estimate):** _____

Mentor name: _____ **Student Name:** _____

Mentor signature: _____

Please complete and return the Rotation Agreement and confirm that you understand the potential financial obligations if a student selects you as a mentor for research leading to a dissertation. ***This form needs be returned to Hong Lan at hlan1@jhmi.edu before the rotation start***



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BME PHD THESIS COMMITTEE MEETING REPORT

NOTE: Thesis committee meetings have the option of beginning without the student present for the mentor to review the student's progress with committee members. At the end of the meeting, the student may opt for the mentor to leave the room and talk alone with committee members.

Name of student: _____ Matriculation year: _____

Name of advisor: _____ Date of meeting: _____

Number of previous thesis committee meetings: _____

The most senior member of the committee (other than the mentor) usually serves as the "chair", and should fill out the required information after discussion with the committee.

Committee evaluation of progress (check one):

- The student is on trajectory for completion of PhD in __ 1 year, __ 2 years, or __ > 2 years
- Concern regarding trajectory or thesis project (*student/advisor must meet with program director*)

The above named student is in the final phase (final 6 months of training) and will be allowed to write a dissertation and graduate when the items listed on the second page are complete:

- Yes No

Mentor's signature

Date

Student's signature

Names and signatures of other Committee Members present:

1) _____
Name (Chair) *Signature*

2) _____
Name *Signature*

3) _____
Name *Signature*

Summary of committee recommendations (for students not in final phase):

The committee agrees that the student is in the final phase and that completion of the following allows the student to write their dissertation and graduate:

Students in the final phase are expected to complete requirements within six months of the final thesis meeting. If the student is unable to do so, another meeting will be scheduled [by the Academic Program Manager] after six months.