Student Guide
(updated 8/26/2021)

Department of Biochemistry and Molecular Biology Graduate Training Program

www.jhu-bmb-PhD.org
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INTRODUCTION

The goal of the Department of Biochemistry and Molecular Biology (BMB) Graduate Training Program is to train highly qualified scientists who will go on to become the future leaders and supporters of biomedical research. Through research, teaching, and service opportunities available through the program, trainees are expected to contribute to new insights into the biochemical, molecular, and biophysical underpinnings of cellular and molecular processes that have an impact on public health.

Research activities of faculty affiliated with the program span a broad range of topics including: genome biology and maintenance of genome integrity, mechanisms of cell division and cell cycle regulation, cell migration and metastasis, tumor microenvironment, cellular stress response pathways, immune responses and inflammation, regulation of gene expression, signaling pathways, stem cell biology, structural biology and biophysical sciences, data science, and computational biology.

PhD PROGRAM REQUIREMENTS

Program requirements are summarized in the “Academic Program Milestones Checklist” found in APPENDIX XI: ACADEMIC PROGRAM MILESTONES. This checklist is designed to assist students in registering for and completing required courses and scheduling and completing program requirements. Students are advised to update this checklist on a regular basis and review their progress with faculty advisors to ensure that milestones are being met as required for progress in the program. The checklist can be reviewed as part of the annual Individual Development Plan (IDP) meeting with advisors (see APPENDIX X: INDIVIDUAL DEVELOPMENT PLAN).

Departmental Activity Requirements

All students, regardless of year of training, are required to attend the weekly BMB Departmental Seminar Series, the monthly BMB Colloquium Series, OPTIONS program workshops (see below), and the annual BMB retreat. Students who have completed their first year of study are also required to participate in the weekly Cancer Biology Journal Club. Notices about the timing, location and content of individual activities will be communicated to students through Email and information can also be found on the BMB department website. More detailed information on these activities can also be found in APPENDIX IV: DEPARTMENTAL ACTIVITIES.

Coursework Requirements

Overall, the School of Public Health’s general requirements for the PhD include: (1) all students must complete a minimum of 64 credits, (2) all students must complete 18 of their required credits through courses offered outside of their program’s home department (BMB), (3) students must complete a minimum of 9 of their required credits through courses offered outside of their home department, but within the School of Public Health, and (4) all students must complete the Cells to Society course modules. All PhD students in the BMB training program have a common core curriculum, outlined below, that meets these general requirements.

Cells to Society (PH.552.XXX.81)

The Bloomberg School of Public Health is accredited through the Council on Education for Public Health (CEPH), and thus requires courses to satisfy the accreditation standards defined by the Council. The Cells to Society courses are online, 0.5 credit courses that satisfy the CEPH standards. These courses are
Pass/Fail and students must earn a Pass in each course to fulfill degree requirements. Courses include:

<table>
<thead>
<tr>
<th>Course no.</th>
<th>Course name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH.552.601</td>
<td>Foundational Principles of Public Health</td>
</tr>
<tr>
<td>PH.552.602</td>
<td>The Role of Quantitative Methods in Public Health</td>
</tr>
<tr>
<td>PH.552.603</td>
<td>The Role of Qualitative Methods and Science in Describing &amp; Assessing a Population’s Health</td>
</tr>
<tr>
<td>PH.552.604</td>
<td>Causes and Trends in Morbidity and Mortality</td>
</tr>
<tr>
<td>PH.552.605</td>
<td>The Science of Primary, Secondary and Tertiary Prevention in Population Health</td>
</tr>
<tr>
<td>PH.552.606</td>
<td>The Critical Importance of Evidence in Advancing Public Health Knowledge</td>
</tr>
<tr>
<td>PH.552.607</td>
<td>Essentials of Environmental Health</td>
</tr>
<tr>
<td>PH.552.609</td>
<td>Psychological and Behavioral Factors that Affect a Population’s Health</td>
</tr>
<tr>
<td>PH.552.610</td>
<td>The Social Determinants of Health</td>
</tr>
<tr>
<td>PH.552.611</td>
<td>The Impact of Globalization on Global Burdens of Disease</td>
</tr>
<tr>
<td>PH.552.612</td>
<td>Essentials of One Health</td>
</tr>
<tr>
<td>[PH.260.600]</td>
<td>[Introduction to the Biomedical Sciences – can be substituted for 552.604: Causes and Trends in Morbidity and Mortality]</td>
</tr>
</tbody>
</table>

**Note:** These courses are offered primarily in 1st and 3rd term, about half are offered in 2nd term, and PH.552.612.81 is the only one offered in 4th term (see the JHSPH course catalog for details). These courses should be taken throughout the first two years of the program and it is required that all courses be completed by the end of the second year of training.

**Other Required Courses, Years 1 and 2**

**Note:** Courses designated ME are offered by the School of Medicine and those designated PH are offered by the Bloomberg School of Public Health)

### Year 1

<table>
<thead>
<tr>
<th>Term</th>
<th>Course No.</th>
<th>Course name</th>
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<tbody>
<tr>
<td>1st</td>
<td>ME.100.716</td>
<td>Analysis of Macromolecules (3 credits)</td>
</tr>
<tr>
<td></td>
<td>ME.110.733</td>
<td>Principles of Genetics (3 credits)</td>
</tr>
<tr>
<td></td>
<td>ME.120.822</td>
<td>Seminars in Research in Biochemistry and Molecular Biology (1 credit)</td>
</tr>
<tr>
<td></td>
<td>ME.120.850</td>
<td>Biochemical Techniques (lab rotations; 6 credits)</td>
</tr>
<tr>
<td></td>
<td>PH.120.852</td>
<td>Current Research Literature (2 credits)</td>
</tr>
<tr>
<td></td>
<td>PH.120.872</td>
<td>Current Topics in BMB (1 credit)</td>
</tr>
<tr>
<td></td>
<td>ME.260.709</td>
<td>Molecular Biology and Genomics (3 credits)</td>
</tr>
<tr>
<td></td>
<td>PH.120.840</td>
<td>Special Studies and Research/BMB (1 credit)</td>
</tr>
<tr>
<td></td>
<td>PH.120.850</td>
<td>Biochemical Techniques (lab rotations; 6 credits)</td>
</tr>
<tr>
<td>2nd</td>
<td>ME.100.716</td>
<td>Analysis of Macromolecules (3 credits)</td>
</tr>
<tr>
<td></td>
<td>ME.110.733</td>
<td>Principles of Genetics (3 credits)</td>
</tr>
<tr>
<td></td>
<td>ME.120.822</td>
<td>Seminars in Research in Biochemistry and Molecular Biology (1 credit)</td>
</tr>
<tr>
<td></td>
<td>ME.120.850</td>
<td>Biochemical Techniques (lab rotations; 6 credits)</td>
</tr>
<tr>
<td></td>
<td>PH.120.852</td>
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<td>Special Studies and Research/BMB (1 credit)</td>
</tr>
<tr>
<td></td>
<td>PH.120.850</td>
<td>Biochemical Techniques (lab rotations; 6 credits)</td>
</tr>
<tr>
<td>Term</td>
<td>Course No.</td>
<td>Course name</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>2nd</td>
<td>PH.120.852</td>
<td>Current Research Literature (2 credits)</td>
</tr>
<tr>
<td>3rd</td>
<td>ME.110.728</td>
<td>Cell Structure and Dynamics (3 credits)</td>
</tr>
<tr>
<td></td>
<td>or ME.360.72</td>
<td>Pathways and Regulation (3 credits)</td>
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<tr>
<td></td>
<td>PH.140.615</td>
<td>Statistics for Laboratory Scientists I (4 credits)</td>
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<td>PH.120.822</td>
<td>Seminars in Research in Biochemistry and Molecular Biology (1 credit)</td>
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<tr>
<td></td>
<td>PH.120.850</td>
<td>Biochemical Techniques (lab rotations; 6 credits)</td>
</tr>
<tr>
<td></td>
<td>PH.120.852</td>
<td>Current Research Literature (2 credits)</td>
</tr>
<tr>
<td>4th</td>
<td>PH.120.624</td>
<td>Cancer Biology (3 credits)</td>
</tr>
<tr>
<td></td>
<td>PH.120.630</td>
<td>Fellowship Grant Writing in Biomedical Research (2 credits)</td>
</tr>
<tr>
<td></td>
<td>PH.120.822</td>
<td>Seminars in Research in Biochemistry and Molecular Biology (1 credit)</td>
</tr>
<tr>
<td></td>
<td>PH.120.840</td>
<td>Special Studies and Research/BMB (4 credits)</td>
</tr>
<tr>
<td></td>
<td>PH.120.850</td>
<td>Biochemical Techniques (lab rotations; 6 credits)</td>
</tr>
<tr>
<td></td>
<td>PH.140.616</td>
<td>Recommended (optional): Statistics for Laboratory Scientists II (4 credits)</td>
</tr>
<tr>
<td>Summer</td>
<td>PH.120.829</td>
<td>Summer Thesis Research (12 credits)</td>
</tr>
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</table>

**Year 2**

<table>
<thead>
<tr>
<th>Term</th>
<th>Course No.</th>
<th>Course name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>PH.120.820</td>
<td>Thesis Research (11 credit)</td>
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<tr>
<td></td>
<td>PH.120.822</td>
<td>Seminars in Research in Biochemistry and Molecular Biology (1 credit)</td>
</tr>
<tr>
<td></td>
<td>PH.120.840</td>
<td>Special Studies and Research/BMB (3 credits)</td>
</tr>
<tr>
<td></td>
<td>PH.550.600</td>
<td>Responsible Conduct of Research (1 credit)</td>
</tr>
<tr>
<td>2nd</td>
<td>PH.120.820</td>
<td>Thesis Research (11 credit)</td>
</tr>
<tr>
<td></td>
<td>PH.120.822</td>
<td>Seminars in Research in Biochemistry and Molecular Biology (1 credit)</td>
</tr>
<tr>
<td></td>
<td>PH.120.840</td>
<td>Special Studies and Research/BMB (4 credits)</td>
</tr>
<tr>
<td>3rd</td>
<td>PH.120.820</td>
<td>Thesis Research (11 credit)</td>
</tr>
<tr>
<td></td>
<td>PH.120.822</td>
<td>Seminars in Research in Biochemistry and Molecular Biology (1 credit)</td>
</tr>
<tr>
<td></td>
<td>PH.120.840</td>
<td>Special Studies and Research/BMB (4 credits)</td>
</tr>
<tr>
<td>4th</td>
<td>PH.120.820</td>
<td>Thesis Research (11 credit)</td>
</tr>
<tr>
<td></td>
<td>PH.120.822</td>
<td>Seminars in Research in Biochemistry and Molecular Biology (1 credit)</td>
</tr>
<tr>
<td></td>
<td>PH.120.840</td>
<td>Special Studies and Research/BMB (4 credits)</td>
</tr>
</tbody>
</table>

**Required Courses, Years 3 and above**

Students are to register for these courses in terms one to four:
PH.120.822, Seminars in Research in Biochemistry and Molecular Biology (1 credit)
PH.120.840, Special Studies and Research/BMB (4 credits)

Every summer term after year one, students are required to register for:
PH.120.829, Summer Thesis Research (12 credits)
Additional Course Requirements

- **Cancer Biology Courses:** Students who are supported by the National Cancer Institute T32 training grant in their second year or beyond are required to take *Fundamentals of Cancer: Cause to Cure* (ME.510.706) or *New Approaches to Cancer Prevention and Therapy* (ME.510.701) offered by the Sydney Kimmel Comprehensive Cancer Center. These courses should be taken during the time that students are supported by the training grant. Students should consult with one of the Program Director or Academic Coordinator regarding course availability.

- **Responsible Conduct of Research:** All research students must complete courses in the responsible conduct of research before graduation. Currently, the online course *Academic and Research Ethics* (PH.550.860) must be completed by all students during the first term of matriculation. Students must also take the course *Responsible Conduct in Research* (PH.550.600), in the 1st term of their second year. Students should refer to the Bloomberg School of Public Health Code of Academic Ethics.

- **OPTIONS program requirements:** All students are required to participate in the OPTIONS program managed by the Professional Development and Career Office (PDCO). A meeting with first-year students and the director of the OPTIONS program will be scheduled for the fall of the first year of training. The program requirements include:
  
  Year 1 – 3 hours of career awareness programming  
  Year 2 – 3 hours of career awareness programming  
  Year 3 – 12 hours of career exploration programming (6x2 hours) and interview  
  Year 4 – Meet with OPTIONS program director, Dr. CJ Neely, to develop strategic career plan

APPENDIX IV: DEPARTMENTAL ACTIVITIES provides additional information. For detailed information, visit the OPTIONS program page program requirements section.

- **Teaching Assistant (TA) obligations:** All BMB PhD students are required to serve as a TA for one BMB course during their second or third year of training. Information on the BMB TA policy and TA opportunities can be found in APPENDIX XIII: BMB TEACHING ASSISTANT (TA) POLICY.

**Competencies**

A table showing the academic competencies that PhD students in the department are expected to obtain prior to graduation is available the internal BMB Team site’s Student Forms page (login to MyJHSPH required for access).

**Laboratory Rotations**

During their first year, students spend approximately one-half of their time performing bench research during four laboratory rotations. The rotations last eight weeks and are conducted in labs affiliated with the BMB training program. A complete list of eligible labs and training faculty can be found in APPENDIX XII: Program Faculty Preceptors and on the program website.

The purpose of these rotations is to familiarize the student with research activities performed by faculty members in the program and to allow the student to make an informed decision in choosing a thesis advisor and research lab. Rotation selections will be made as follows:

- For the first rotation, students will be requested to provide the names of three labs for possible
rotation assignment prior to their arrival in the fall. Assignments will be made by the Program Director based on this list.

• For the second through fourth rotations, students are expected to meet with faculty preceptors to discuss and secure their next lab rotation. These discussions should occur no later than two weeks prior to the end of their current rotation. Students should inform the Program Director, Dr. Matunis, of their rotation choices one week prior to the beginning of each rotation.

Students are allowed to rotate only once in any given lab. Normally, the rotations will be distributed so there is only one rotation student per laboratory. This rule may be waived if there are unusual circumstances. To assist students in rotation choices, the department offers a one-credit course titled “Current Topics in BMB” held during the first term of the academic year, in which training faculty introduce themselves and their research to students.

Students will be given a specific research project at the beginning of each laboratory rotation. The student is expected to acquire the necessary background information to carry out the project through literature reviews and discussions with the faculty advisor and other lab members. In carrying out the project, the student can also expect hands-on assistance as required from the faculty heading the lab and his/her trainees.

At the end of each rotation, first year students present a report on their rotation project before the faculty and other interested parties. Each student will write a brief abstract which is to be submitted to the Academic Coordinator at least one day before the rotation report date. During the rotation report, students give an oral presentation lasting 10 minutes. A five-minute question period follows each oral presentation. Each student is also required to complete a rotation self-evaluation form at the end of each rotation (APPENDIX V: ROTATION EVALUATION REPORT (STUDENT)). The completed form should be discussed in person with the faculty advisor who will provide his/her own assessment of the student’s understanding of the project, effort, interest and technical abilities in carrying out the project. The faculty’s assessment, including an overall evaluation of the rotation, will be documented on the final page of the form. The signed form must be returned to Academic Program Coordinator one week following the end of each rotation.

Satisfactory Academic Progress and Laboratory Rotation Performance

• Students must receive a grade of B or better in all required core courses. Accumulation of two or more C’s or lower in these courses is grounds for possible dismissal from the program. If a student receives a C or lower grade in any of these required courses, they must repeat the course and receive a B or better grade the second time.

• The School of Public Health requires PhD candidates to achieve a final GPA of 3.0 or higher for graduation.

• Students must receive satisfactory evaluations for each of the four laboratory rotations. Receiving two or more “poor” evaluations is grounds for possible dismissal from the program.

• Academic progress and laboratory rotation performances will be evaluated by the Program Steering Committee prior to the completion of the 4th rotation. Students who have met both academic and laboratory rotation standards will be notified and permitted to select a laboratory for thesis research. Students who have not met these standards may be dismissed from the program.

• Students who do not meet program standards will be fully reviewed by the Program Steering Committee and decisions concerning an appropriate course of action, including possible dismissal from the program, will be made following consultation with the Program Directors.

Selecting a Thesis Advisor
As a general policy, only one student may enter a given laboratory in any one year. Exceptions to this policy are made when circumstances warrant. Students are expected to meet with potential thesis lab advisors during the two weeks prior to the end of the fourth rotation and discuss the possibility of joining that lab for their thesis studies. Following these meetings, students will provide the Academic Program Coordinator with the names of possible thesis advisors. Names must be submitted one week prior to the end of the fourth rotation. Students may be requested to meet and discuss thesis lab choices with the Program Director, Dr. Matunis. Thesis lab placements will formalized between the student and advisor following approval by the Program Director. Every effort will be made to give students their first choice of thesis research lab.

**PROGRAM AND SCHOOL QUALIFYING EXAMS**

Following the completion of the first year of training, students must satisfactorily complete two qualifying exams. The first exam is administered by the training program and consists of a written proposal based on each student’s thesis research topic. The second exam, or Preliminary Oral Exam (POE), is administered by the School of Public Health and consists of an oral defense aimed at testing students’ breadth and depth of knowledge and ability to conduct research in their field of study. The first exam, and a practice oral exam, must be successfully completed before students are eligible to schedule the POE.

**Thesis Proposal / Written Comprehensive Examination**

The program written examination is a two-part exam that is based on the student’s doctoral thesis research project. Students must write a six-page research proposal that follows the format of a NIH F31 fellowship. This proposal should be written with guidance from the thesis advisor during the summer/early fall of the second year of training. The completed proposal must be submitted by the first week of October of the second year to a committee consisting of the student’s thesis advisor and two other JHU faculty members that may be within or outside of BMB. The student will meet with their committee members to review the proposal and receive instructive feedback and recommendations for revisions aimed at strengthening and improving the document. A revised written proposal must be submitted to the committee by November 15th. Once the revised proposal is approved by the committee, the student has passed the departmental written exam requirement. Full details of the examination process are provided in APPENDIX VII: THESIS RESEARCH PROPOSAL / WRITTEN COMPREHENSIVE EXAMINATION. Additionally, detailed instructions on how to develop and write a research proposal shall be covered in the Fellowship Grant Writing course taken in year one.

All students are strongly encouraged to submit their proposals for consideration for funding through the variety of agencies that support pre-doctoral training. A full list of funding opportunities can be found at the JHU Office of Research Graduate Student Funding Opportunities page.

**School Preliminary Oral Examination (POE)**

**Practice Exam**

Students are required to successfully pass a university administered POE (described below) to be officially accepted as candidates for the PhD degree. In preparation for this exam, students are required to schedule an oral examination practice session within 4 months of completing their thesis proposal/written exam. This practice session should be held no later than 1 month prior to the POE. The purpose of the practice session is to help assess exam readiness. The student will select a committee consisting of his or her PhD thesis advisor and five peers. These five peers should be pre-doctoral students who have already
taken and passed their oral exam, and/or postdoctoral students. No more than two of the peers can be from the student’s own laboratory. Scientific diversity is highly encouraged. The role of the advisor is to ensure that the practice session emulates the official POE mandated by the university, and to provide feedback and guidance to the student for the final stages of his/her preparation. A form (available from the BMB academic office) attesting that the practice session has taken place must be signed and dated by the members of the committee, including the student’s advisor, and filed with the Program Academic Coordinator. The student is allowed to finalize the faculty panel and schedule the POE prior to the oral examination practice session. However, the practice session must be completed before the official examination.

Official Exam
The official POE is administered by the School of Public Health and is designed to test the student’s breadth and depth of knowledge in his or her area of study. Students must pass this examination to officially become candidates for the PhD degree. The composition of the examining committee must meet the following criteria:

1. consist of at least five voting members, no more than three of whom may be from the department sponsoring the candidate; the student’s thesis advisor will not be a member of the examining committee;
2. be comprised of duly appointed faculty members of Johns Hopkins University departments and must hold, at the time of selection, an appointment at the rank of Assistant Professor, Assistant Research Professor or Assistant Public Health Professor or higher;
3. be comprised of three departments of Johns Hopkins University, two being from the Bloomberg School of Public Health; and
4. include a faculty member outside of BMB who has a rank of Associate or Full Professor, Research Professor or Public Health Professor; there must be at least one member who has neither a primary nor joint appointment in BMB.

The chair of the committee is appointed by the Senior Associate Dean for Graduate Affairs. The senior faculty member outside of the student’s department will normally serve as chair and must hold the rank of Associate or Full Professor. One adjunct faculty member or Scientist track faculty member may serve on the committee but may not serve as chair. Once a PhD candidate’s committee has been approved by the Office of Academic Affairs, substitution of committee members may not be made without prior approval of that office. Students are encouraged to select their committee members and two alternates in consultation with their thesis advisor. Forms must be completed and submitted to the office of Academic Affairs at least one month prior to the exam.

Before the oral exam begins, the student’s thesis advisor will meet briefly with the committee and without the student. Following this meeting, the advisor will leave and the exam will begin with the student providing a brief, 5-minute introduction to their thesis research project. During the oral examination, each faculty member of the committee is given an opportunity to ask questions (~15 minutes/faculty member) designed to probe the student’s understanding of the basic principles of biochemistry, molecular and cellular biology, and ability to conduct hypothesis driven research. The examination has three possible outcomes: unconditional pass; conditional pass; or failure. In cases of conditional pass, students may be required to take additional coursework or write a report to remove the condition. If the student fails the exam, the examining committee may recommend one of the following: (1) dismissal from the program, (2) reexamination by the same committee, (3) reexamination in written form by the same committee, (4) reexamination by a new committee. If permitted, a successful reexamination must be completed within one year. The POE should be completed by April 30th of the second academic year.
POST PRELIMINARY ORAL EXAM

Thesis Advisory Committee

Upon successfully completing the POE, a Thesis Advisory Committee is formed to monitor the student’s progress on his/her thesis research. The committee consists of at least three faculty members (typically four) including the student’s thesis advisor. Members of the committee may have primary appointments in BMB or in other departments of the university. Students are encouraged to select members of their committee in consultation with their thesis advisor. In addition to regularly scheduled meetings with their Thesis Advisory Committees, students are also encouraged to consult regularly with their committee members for advice, as necessary.

Students are required to meet with their Thesis Advisory Committees at least once each year, beginning from the time that they select a thesis lab in April of their second year. Students entering year 5 of training are required to meet with their committee every 6 months. Thesis committee meetings will be conducted using the following format:

1. Students will designate one committee member as the chair – this should be the most senior BMB faculty member on the committee, excluding the thesis advisor. If the thesis advisor is the only BMB faculty member on the committee, the chair should be the most senior faculty member from outside of the department.

2. The APPENDIX VIII: ANNUAL THESIS COMMITTEE MEETING FORM (STUDENT) will be completed and mailed to all committee members at least one day in advance of the meeting.

3. The meeting begins with the student stepping out of the room, allowing for a private discussion between committee members.

4. The meeting proceeds with the student presenting research progress and any other relevant information related to meeting individual development plans and progress toward graduation.

5. Following completion of the student presentation, the committee chair will lead a discussion that summarizes the committee’s views on student progress and recommendations for continued success and timely completion. Specific points in the committee’s (APPENDIX IX: ANNUAL THESIS COMMITTEE MEETING FORM (COMMITTEE) will also be discussed and the form will be completed by the chair and signed by all committee members before the end of the meeting. The student will retain a copy of the form and return a copy to the one of the Academic Coordinator.

6. The meeting concludes with the thesis advisor stepping out the room, allowing for a private discussion between the student and all other committee members.

Individual Development Plans

After joining a thesis research laboratory, all pre-doctoral trainees and their preceptors are required to participate in an Individual Development Plan (IDP) process on an annual basis. The form being used for this purpose is provided in APPENDIX X: INDIVIDUAL DEVELOPMENT PLAN.

As part of this process, trainees and their mentor discuss the following elements during a confidential, face-to-face meeting set up specifically for the IDP purpose:
1. Career goals
2. Assessment of relevant skills, ranging from proficiency at the lab bench to knowledge of the literature, oral presentation, writing, leadership, collegiality, etc., as they relate to these goals
3. List the achievements of the last year
4. Set specific goals relating to productivity, training, and professional development for the upcoming year
5. Discuss time to graduation and preparation for post-graduation professional life
6. Required to review University Mentor/Mentee Rights and Responsibilities documents

Completed IDP forms are to be sent to the IDP Program Director, Dr. Daniella Drummond-Barbosa.

**Thesis Preparation and Final Oral Exam**

The Thesis Advisory Committee must approve a target date for completion of the thesis project and final defense. When this approval has been granted, the student should begin preparing to write his or her thesis. The thesis must consist of novel and publishable research findings, and may contain material that has already been published by the student during the course of the thesis project.

The thesis will be evaluated by a Thesis Defense Committee composed of four readers, including the student’s thesis advisor. Two committee members must have a primary faculty appointment in a department other than BMB. The readers should have a rank of Assistant Professor or higher. A minimum of three departments of Johns Hopkins University, two from the School of Public Health, must be represented. Two readers must be primarily affiliated with BMB. At least one member must have neither a primary nor joint appointment in BMB. The committee may be increased to five members, provided that the above conditions are satisfied for four readers. The Appointment of Thesis Readers and Final Oral Exam form must be submitted to the BMB Academic Office at least one month prior to the date of the thesis defense. The thesis, accompanied by a letter from the student’s advisor signifying that the thesis is ready for distribution to the committee, should be submitted to the Thesis Committee at least two weeks prior to the thesis defense. On the date of the defense, students are required to give an oral presentation of their research findings in a seminar open to the public. Following the presentation, the student will meet with the defense committee for a final oral examination.

**Within one month of successfully completing the thesis defense and any required thesis revisions, students must submit their final thesis** with edits to the university library. The instructions for submitting the thesis as well as the Appointment of Thesis Readers and Final Oral Exam documents can be found on the internal MyJHSPH site’s [Doctoral Candidate Information page](https://myjhsph.jhu.edu/doctoral-candidate-information) (login to MyJHSPH required for access).

**RESIDENCY REQUIREMENTS/ LEAVE AND WITHDRAWAL POLICIES**

**Residency Requirements and Time Limitations**

In accordance with Johns Hopkins University policy, a minimum of four consecutive terms of registration as a full-time student is required. Experience indicates that a minimum of four and one-half years is necessary to fulfill all PhD requirements and that the average student requires about five to six years. Not more than seven years may elapse between the date of matriculation and fulfillment of all requirements for the degree.
Withdrawal from Program

If a student withdraws from the PhD program prior to completion of his or her degree, whether for personal or academic reasons, tuition and stipend support will be provided by the department for the remainder of the term during which the decision to withdraw is made. The department may opt to deviate from this policy depending on the particular circumstances. These guidelines are not intended to eliminate flexibility in the scheduling of holidays and vacation, and do not replace any conditions that might be imposed by fellowships/funding agencies. These guidelines also do not restrict legitimate academic or research activities conducted off campus, such as attendance at scientific meetings and field work. Students are generally entitled to the following holidays and vacation time:

- University holidays
- Spring break
- The period between last day of 2nd term and the first day of winter intersession
- A fortnight vacation in the second and subsequent years as scheduled by arrangement with the advisor

Graduate students are expected to be present during winter intersession and summer term or as required by their experimental protocols.

Leave Policies (Vacation, Sick, Leave of Absence, Parental Leave)

Vacation

Graduate student holiday and vacation schedules traditionally have been flexible to accommodate the varied demands of individual research projects. The department considers graduate education, research and training to be a full-time, 12-month-per-year undertaking. It is the policy of the training program that graduate students are permitted two weeks of vacation annually, in addition to:

- University holidays
- Spring break
- The period between last day of 2nd term and the first day of winter intersession

Graduate students are expected to be present during winter intersession and summer term or as required by their experimental protocols. Only in exceptional circumstances will a student be permitted to take a vacation of more than one month’s duration. These guidelines are not intended to eliminate flexibility in the scheduling of holidays and vacation, and do not replace any conditions that might be imposed by fellowships/funding agencies. These guidelines also do not restrict legitimate academic or research activities conducted off campus, such as attendance at scientific meetings and field work. Students should consult with their thesis advisors before formalizing vacation plans.

Sick Leave/Leave of Absence

A leave of absence (LOA) is for students who are forced to take a temporary break from their programs of study due to reasons beyond their control, such as illness, military service, financial exigency, or pressing personal reasons justifying an interruption of their graduate studies. A leave of absence is an officially recognized inactive student status that is entered on a student's academic record. LOA cannot be used by a student working on a thesis who has completed all other degree requirements. LOA is limited to one academic year except for military service. Guidance on taking a leave of absence can be obtained from the Associate Dean for Enrollment Management and Student Affairs, Mike Ward, or the Program Advisor for Student Matters, Dr. Jennifer Kavran. Applications for LOA must be made on a form available from an Academic Coordinator.

Parental Leave Policy for Graduate Students
Graduate students may request parental leave following the adoption or birth of a child. Parental leave applies to either or both parents and includes sixty calendar days of stipend/salary support and health insurance coverage. Additional *unpaid* leave may be granted at the discretion of the advisor. If both parents are graduate students and/or postdoctoral fellows in the same school, both may request simultaneous parental leave. Parental leave must be requested on a Departmental Paid Leave of Absence form, available from the Payroll Coordinator. More detailed information is available from [this JHU Policies page](#).

**STUDENT FUNDING**

**Tuition and Fees**

The department provides full tuition and fee support for all PhD students while enrolled in the program.

**Health Insurance**

All full-time and foreign students are required to be enrolled in a qualified health insurance plan. At the time of registration, students must provide written proof of enrollment in a plan that meets standard guidelines in the State of Maryland. For those students who do not have existing health insurance coverage, the Bloomberg School of Public Health offers the Student Health Plan (SHP). The department provides full support for individual enrollment in SHP. The department also supports the required UHS Clinic Fee and (optional) individual dental coverage (Access Plan). For more information on health insurance, please see the Bloomberg School’s [Health Benefits and Insurance page](#).

**Stipends, Salaries, and Income Taxes**

During their first year, PhD students will receive stipend support from departmental (non-sponsored) funds. After the first year, PhD students may receive stipend support from an institutional training grant, salary support from a research grant, or a combination of both. In keeping with federal guidelines, stipend (scholarship/fellowship) income is not taxed by Johns Hopkins University, although it is likely to be taxable income. Salary to graduate students from research grants is taxed, although these wages are not subject to Social Security or Medicare tax (FICA).

Stipend recipients should investigate making federal and state estimated tax payments. All students should use their December 31 pay stub as documentation of compensation for tax purposes, as forms W-2 and 1099 will not include stipend payments. Pay stubs may be viewed and printed from ESS (Employee Self Service), available through [my.jh.edu](#).

Visit the [IRS website](#) to obtain form 1040ES, regarding Federal estimated tax payments. Student Tax Issues are addressed in IRS Publication 4. Visit the [Maryland tax website](#) to receive form 502D for Maryland estimated tax payments. Assistance may also be obtained from the JHU Tax Office (Eastern Campus) at 443-997-8442, or by emailing tax@jhu.edu. Consultation with a personal tax advisor is encouraged.

**Taxation of Nonresident Aliens**

Nonresident aliens are usually taxed on earnings received while living in the United States. Generally, nonresident aliens (F-1 and J-1) are exempt from FICA (Social Security tax). If the Visa type is F-1 or J-1, the student may be exempt from Federal taxes only if the country where the student lived before arriving in the US has negotiated an income tax treaty with the United States government. The country in which the
student was born is not a deciding factor. If the country of residence has negotiated an income tax treaty, and it covers the type of payment the student is receiving while visiting the United States, the student should complete Form 8233 for earned wages or Form W-8BEN for scholarship/fellowship payments. These forms must be completed each calendar year so that Federal tax is not withheld. State taxes must be withheld on wage payments paid by the University. Forms are available at the JHU Tax Office form library website. At year-end, the University issues to nonresident aliens either a Form 1042-S or Form W-2, or both, which summarizes income. Nonresident aliens are required to complete federal form 1040NR to report and pay taxes, if appropriate, on any income. An excellent guide to Nonresident Alien taxation is IRS Publication 519, available from the IRS website.

Note: The department cannot provide individual tax advice to students. All tax-related questions should be directed to the JHU Tax Office at (443) 997-8442; information is also available on their website. The office is located at the Eastern Campus at 1101 East 33rd Street. To assist international students, the Office of International Students, Faculty, and Staff Services, in cooperation with the JHU Tax Office, conducts tax seminars in March of each year.

Training Grant Support

Eligible students may be supported by the program’s NCI-funded T32 training grant “Training in Areas Fundamental to Cancer Research” in their second and third years of training. Appointment to the training grant is based on a competitive review of applications solicited in the spring of each year.

Training Grant Requirements

All students supported by the T32 training grant are subject to the following requirements:

- Complete an online Statement of Appointment annually.
- Provide annual reports on the progress of his or her doctoral studies.
- Acknowledge the training grant in all publications resulting from his or her doctoral studies.
- Participate in the annual Sidney Kimmel Cancer Center’s Fellow Research Day event
- Complete an online Notice of Termination upon termination of training grant support.

Additional course requirements specific to the NCI-funded T32 training grant:

Fundamentals of Cancer: Cause to Cure (ME.510.706) or New Approaches to Cancer Prevention and Therapy (ME.510.701) offered by the Sydney Kimmel Comprehensive Cancer Center. **See Academic Program Coordinator regarding course availability.

A list of T32 Preceptors can be found in APPENDIX XII:

Additional Funding Information

For more information on PhD student funding opportunities, visit the JHU Office of Research Graduate Student Funding Opportunities page.
APPENDICES
APPENDIX I: PROGRAM DIRECTORY

BMB Administration

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Office</th>
<th>Email address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roza Selimyan</td>
<td>Academic Program Administrator</td>
<td>W8507</td>
<td><a href="mailto:rselimyan@jhu.edu">rselimyan@jhu.edu</a></td>
</tr>
<tr>
<td>Toni Doherty</td>
<td>Academic Coordinator</td>
<td></td>
<td><a href="mailto:adohert8@jhmi.edu">adohert8@jhmi.edu</a></td>
</tr>
<tr>
<td>Chandan Prasai</td>
<td>Sr. Grants &amp; Contracts Analyst</td>
<td>E3135</td>
<td><a href="mailto:cprasai@jhmi.edu">cprasai@jhmi.edu</a></td>
</tr>
<tr>
<td>Erika Vaitekunas</td>
<td>Administrative Specialist to the Chair</td>
<td>W3132</td>
<td><a href="mailto:erikav@jhu.edu">erikav@jhu.edu</a></td>
</tr>
<tr>
<td>Kear Wright</td>
<td>Department Administrator</td>
<td>W3132</td>
<td><a href="mailto:kwright@jhu.edu">kwright@jhu.edu</a></td>
</tr>
<tr>
<td>Sarah Studer</td>
<td>Communication Specialist</td>
<td>W8041B</td>
<td><a href="mailto:ssuder3@jhu.edu">ssuder3@jhu.edu</a></td>
</tr>
</tbody>
</table>

Training Program Steering Committee

Dr. Michael J. Matunis (Program Director and Committee Chair)
Dr. Ashani Weeraratna (Program Director and Department Chair)
Dr. Roza Selimyan
Dr. Daniela Drummond-Barbosa
Dr. Scott Bailey
Dr. Alan Meeker

Program Advisor for Student Matters

Dr. Jennifer Kavran, W3116, jkavran@jhu.edu
APPENDIX II: HELPFUL RESOURCES

Administrative

Human and Animal Subjects
Before beginning contact with either human or animal subjects, students (as all researchers) must obtain the appropriate approval for their projects from either an Institutional Review Board or the Institutional Animal Care and Use Committee. In both cases, the student’s faculty mentor must be involved in this process, since the protocol for the research project is submitted under the advisor’s name with the student listed as a student investigator. It is important to remember that NO contact can be made with humans, human tissue, human samples or human records without prior approval.

Students intending to work with human subjects should contact Kear Wright for information on required training and procedures.

Students working with animals must complete online training available through the JHU Animal Care and Use Committee Training Program page. Students should consult with their research advisor on the specific course(s) required for their individual research projects. Animal protocols will not be approved or renewed unless individuals working with animals complete this training. It is also mandatory that all individuals working with animals at Johns Hopkins University enroll in the Animal Exposure Surveillance Program (AESP). The program is designed to prevent occupation-related disease among those working with animals. Enrollment consists of the completion of an AESP form, available here.

Classroom/Conference Room Scheduling
Rooms W8504, E8015, W8503A and E3130 are available for lab meetings, journal clubs, student exams, and other gatherings. Calendars are maintained online and can be accessed by logging onto the BMB Team Site’s Reservation Calendars page (login to MyJHSPH required for access). Erika Vaitekunas can also provide assistance with scheduling when needed.

Copying
PhD students’ ID badges are coded to allow access to all copiers in the school that are equipped with the Pharos scanner system. The copy machines in room W8034, are both on this system. Students should see Erika Vaitekunas for access or questions.

Demographic Data
Any changes regarding one’s personal status, home address and phone numbers, etc. should be changed through ESS (Employee Self Service), available through my.jh.edu so all payroll and online systems can be updated automatically. A forwarding address is required upon graduation or departure from the department. The department’s NIH training grants require that we document professional careers of our graduates for a 10-year period following their departure from JHU. Therefore, the Department asks that student alumni keep us informed each time there is a change in their contact information or employment situation.

Foreign Students: Visa Applications and Other Issues
Foreign students are required to report to the Office of International Services located in Reed Hall (1620 McElderry St.) on the first day of arrival in the U.S. They should bring their visa and I-94. During the student’s tenure in the department, all visa extensions and other issues pertaining to visa status are handled by department administrative staff (room E3132) in cooperation with the OIS. A student's I-9 (employment eligibility) form must also be updated whenever there is a change in his/her visa status. International students are encouraged to visit the Office of International Services web site. This site also
provides a link to the JHMI International Society. Contact information for School of Public Health and School of Medicine students can be found at the OIS @ Medical Institutions page.

**JHED**
The Johns Hopkins Enterprise Directory is an on-line source of address, telephone, e-mail and other contact information for faculty, staff and students throughout the Johns Hopkins University. Incoming students’ information is pulled into the directory from the Registrar and Payroll databases. It is imperative that students maintain current information in JHED since other resources depend on the directory information. To verify and update information, log on to my.jh.edu. First time users will be prompted to create his/her own password. The JHED user ID and password will be required to access other secure online JHU systems.

**Pay Dates and Check Distribution**
Students are paid semi-monthly (the 15th and the last day of the month) for effort through that date (no lag). Should a payday fall on a weekend or holiday, funds will be distributed on the previous day. Students are encouraged to sign up for direct deposit through our Employee Self Service System (ESS). ESS is a convenient, secure, user-friendly enhancement to the central HR/Payroll system that will allow you to view your personal and payroll data and easily make changes (including direct deposit set-up). All paper checks are delivered to the department Administration Office for pick up, room E3132. You will be notified when your paycheck arrives. If your check is not picked up within 48 hours, we will mail the check to the address on record. Direct deposit stubs can be viewed through ESS (Employee Self Service), available through my.jh.edu - paper stubs are not distributed.

**Registration**
Students are required to register for all Bloomberg School of Public Health courses online through the Student Information System (SIS). Students will be registered for School of Medicine courses with assistance from the Program Academic Coordinator. Students are expected to have their registration for elective courses approved in advance by their advisors.

**Laboratory Safety and Facilities**

**Facilities Management**
Problems with facilities (lights, leaks, etc.) and/or laboratory equipment should be reported immediately to the student’s mentor or to Erika Vaitekunas in the Administration Office.

**Fire Alarms**
All occupants must shut the door to their lab or office and exit the building immediately whenever a fire alarm sounds.

**Radiation Safety**
Radiation safety training will be arranged for PhD students on an as-needed basis. Badges to monitor external radiation exposure will be issued to students upon completion of the training and on a quarterly basis thereafter. When a student receives a new radiation badge, he or she should return the previous badge promptly to Erika Vaitekunas.

**Lab Safety**
The Johns Hopkins University Safety Policy and Procedure Manual is available online at the Hopkins Medicine Health, Safety and Environment website. All students must understand that it is their
responsibility to comply with appropriate safety and health standards as issued by the department and university. Unsafe conditions should be reported immediately to the student’s faculty mentor or to Kear Wright, the BMB Department Administrator.

The Office of Health, Safety and Environmental Health (HSE) has the responsibility of providing guidance and direction in all phases of the safety program. It conducts annual safety and environmental inspections of our laboratories and facilities, advising administration of unsafe conditions or non-compliance with federal and state regulations.

Health and Wellness
JHU has launched a comprehensive health and well-being resource for all students at the Student Well-Being page.

The Calm App
JHU students have free access to the premium version of the Calm app through their JHU webpage.

Johns Hopkins Student Assistance Program (JHSAP)
This program provides support to students in dealing with the pressures and problems they encounter during their academic careers. SAP services are private and confidential, in accordance with state/federal laws and University policies. There is no cost to a student for utilizing SAP services. Services include:

- Short-term counseling
- Crisis response
- Healthy relationship support
- School-life coaching and adjustment
- Educational workshops
- Dean, faculty, and staff consultations

For more information or to schedule an appointment, visit the JHSAP website, call (443) 287-7000, or email jhsap@jhu.edu.

University Health Services (UHS)
UHS provides medical and mental health services to Hopkins students, residents, fellows and trainees and their spouses/domestic partners. Their health care providers consist of internal medicine physicians, psychiatrists, a licensed psychologist, nurse practitioners, and licensed clinical social workers assisted by our clinical and administrative staff. For more information, visit their website. To schedule an appointment, contact University Health Services at (410) 955-3250.

UHS Office of Wellness and Health Promotion
UHS Wellness serves students, post-doctoral fellows, house staff and other trainees within the School of Medicine, Bloomberg School of Public Health, School of Nursing, and the Berman Institute. UHS has a website, a weekly newsletter, hosts monthly wellbeing events, and offers a various wellness opportunities throughout the year. Phone: (410) 955-8705 Email: uhswellness@jhu.edu

Assistance and well-being information for students who are parents can be found at the JHU Benefits & Worklife page.

Sexual Assault
Students in need of support regarding sexual assault and/or sexual violence can find resources and information on the University's Sexual Assault Response and Prevention webpage.
Program Advisor for Student Matters
Dr. Jennifer Kavran serves as the Program Advisor for Student Matters. In this position, she is available to meet with students regarding issues or concerns related to their performance and progress in the program. These include issues related to coursework, laboratory work, or personal interactions with advisors, students for other university employees. As Advisor for Student Matters, Dr. Kavran’s role is strictly limited to providing advice and guidance. Information shared with her is expected to remain confidential, and she is not expected to act on a student’s behalf to resolve issues that are discussed. Student’s seeking additional assistance in resolving issues or concerns should contact the Program Director and Department Chair, Dr. Weeraratna.

Professional Development

JHSPH Career Services
The Career Services Office at the Bloomberg School of Public Health helps students, alumni, faculty, staff and employers navigate the world of public health jobs. Specifically, the Bloomberg School’s Career Services Office provides:

- Career coaching for students and alumni
- Help in preparing a public health resume
- A robust database of public health jobs and internships
- Information about employers
- Access to a growing network of public health professionals

More information is available on their website. You can always contact the Career Services Office directly by email at JHSPH.Careers@jhu.edu or call at (410) 955-3034. To set up an appointment with a career coach, you can log into your Handshake account or contact the office directly. All students are encouraged to join Handshake, a valuable career services platform – visit the login page to get started. If you would like to schedule a virtual session with a Career Coach, please contact Paul Hutchinson paul.hutchinson@jhu.edu or Caroline Kelly ckelley47@jhu.edu.

Profession Development and Career Office (PDCO)
The PDCO provides professional development and career services to graduate students and postdoctoral fellows in the School of Medicine, School of Nursing, and Bloomberg School of Public Health. Services include:

- one on one career counselling appointments
- grant writing workshops
- career fairs
- resume advice
- LinkedIn clinics
- mock interviews
- Internship opportunities
- and more.

Information about services and activities offered can be found on the PDCO website.
JHU Teaching Academy
The Teaching Academy offers PhD students and Post-doctoral Fellows from all divisions across Johns Hopkins University, college teacher training and academic career preparation opportunities through courses, workshops, teaching practicums, teaching-as-research fellowships, and individual consultation. Teaching Academy programs and community are committed to developing and sharing Culturally Responsive Teaching practices and instructional approaches that engage students, support improved learning outcomes, and foster inclusive classrooms and critical pedagogy.

Students are invited to take part in any of the Teaching Academy offerings on an ad-hoc basis. In addition, students considering a career in academia may also participate in the full Certificate of Completion Program.

More information can be found on the JHU Teaching Academy web site.

Biomedical Careers Initiative (BCI)
BCI facilitates internships for PhD students in fields outside academic research, such as R&D in biotech or pharmaceutical companies; technology transfer; science policy; science administration; science education; and scientific writing. The goal of BCI is to provide students the opportunity for hands-on experience in their field of interest.

Advanced PhD candidates who are registered as full-time Johns Hopkins University students are eligible to apply for a BCI internship. Find additional information on the BCI student internships page.

OPTIONS Career Communities
OPTIONS supports PhD students in creating an informed and specific career plan, expanding their professional community, and improving their networking skills. All students are expected to participate in the OPTIONS program and complete the minimum program requirements. Find more information at the OPTIONS Career Communities page.

The manager of the OPTIONS program, Dr. CJ Neely, will meet with first-year students in the fall of the first year to review program requirements and opportunities. provide more information and career support as well. She can be reached at cj.neely@jhu.edu.
Useful links

- **BMB Website**
- **BMB Team Site** (requires MyJHSPH login)
- **School Home Page**
- **School of Public Health Office of Student Affairs**
- **Course Catalog**
- **Welch Medical Library Home Page**
- **Office of Health, Safety, and Environment**
- **Student Assistance Program**
- **Office of International Services**
- **Doctoral Candidate Forms** (Preliminary Oral Exam Form, Appointment of Thesis Readers, Form Final Exam Form; requires MyJHSPH login)
- **JHU Tax Office**
- **Health and Safety Training**
- **Animal Care and Use Training**
- **Johns Hopkins Enterprise Directory (JHED)** (AKA my.jh)
- **Radiation Safety**
- **Registration**
- **JHU Health & Wellness**
- **JHU Calm App**
- **Family and Caregiving Programs**
- **Sexual Misconduct Response & Prevention**
- **JHSPH Career Services**
- **OPTIONS Career Communities**
- **Professional Development and Career Office**
- **JHU Teaching Academy**
- **Biomedical Careers Initiative**
- **Johns Hopkins University Office of the Provost Graduate and Professional Education site**
### APPENDIX III: SUMMARY OF PROGRAM MILESTONES AND COMPLETION DATES

<table>
<thead>
<tr>
<th>PhD Program Milestones</th>
<th>Completion Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory rotations (year one)</td>
<td>(Specific dates vary)</td>
</tr>
<tr>
<td>1(^{st}): September/October</td>
<td></td>
</tr>
<tr>
<td>2(^{nd}): November December</td>
<td></td>
</tr>
<tr>
<td>3(^{rd}): January/February</td>
<td></td>
</tr>
<tr>
<td>4(^{th}): March/April</td>
<td></td>
</tr>
<tr>
<td>Thesis lab selection (year one)</td>
<td>April 15</td>
</tr>
<tr>
<td>Thesis proposal / oral exam (year two)</td>
<td>Oral defense: October 15</td>
</tr>
<tr>
<td></td>
<td>Revised proposal: November 15</td>
</tr>
<tr>
<td>Departmental practice POE (year two)</td>
<td>Before March 31</td>
</tr>
<tr>
<td>University POE (year two)</td>
<td>Before April 30 (within one month of practice POE)</td>
</tr>
<tr>
<td>Thesis Advisory Committee Meetings (years three to completion)</td>
<td>Annual</td>
</tr>
<tr>
<td>Individual Development Plans (year two to completion)</td>
<td>Annual</td>
</tr>
<tr>
<td>Thesis defense</td>
<td>To be determined / Maximum of 7 years</td>
</tr>
</tbody>
</table>
APPENDIX IV: DEPARTMENTAL ACTIVITIES

Departmental Retreat
The BMB departmental retreat is usually held in late March or early April. Attendance is required by all PhD students, postdoctoral fellows and faculty. This retreat allows faculty and students an opportunity to present, in an informal setting, research accomplishments. Students should contact their faculty advisors for more information regarding the format of the presentations. This is a professional retreat and thus family members are not encouraged to attend. Expenses are fully paid by the department. Details of this retreat are provided in February-March.

BMB PhD Club
The PhD Club is organized and managed by students with the purpose of promoting awareness of career opportunities within and outside of academia, as well as creating a forum for predoctoral trainees to discuss a broad range of issues pertinent to their success. The club receives guidance from BMB faculty member Dr. Jennifer Kavran.

BMB Departmental Seminar Series
The departmental seminar series takes place on Mondays at noon throughout the academic year (September -June). Seminars are given by research scientists from both in and outside of the university who have been selected and invited by department faculty. A number of speakers each year are also invited by committee of predoctoral and postdoctoral trainees.

BMB Colloquium Series
The departmental colloquium series takes place once each month (day and time to be announced) throughout the academic year. Each colloquium is hosted by one lab from the training program and features presentations given by trainees in the host lab.

Cancer Biology Journal Club
The departmental Cancer Biology Journal Club takes place on Fridays at noon throughout the academic year and features presentations of selected research papers given by predoctoral and postdoctoral trainees in the program. An emphasis is placed on review of cancer-relevant research papers, but all topics are discussed.

OPTIONS Career Communities
OPTIONS is a series of short workshops walking students through the career preparation process. The program is there to support PhD students in creating an informed and specific career plan, expanding their professional community, and improving their networking skills. Find more information, including the curriculum, at the OPTIONS Career Communities page.

The manager of the OPTIONS program, Dr. CJ Neely, can provide more information and career support as well. She can be reached at cj.neely@jhu.edu.

JHSPH Happy Hour
A student-run (by BMB students) social hour is held each Friday from 4:30-6:00 p.m. in the Student Lounge Court. This is open to all in the school. Beer and soft drinks are sold; pretzels and potato chips are free.

BMB Happy Hour
A departmental social hour is held the first Wednesday of each month in the McCollum Reading room. Only open to faculty, staff and students of BMB. Beer is sold for $1; soft drinks, pretzels and potato chips are free.
Rotation Evaluation Report (Student)

1. Name:

2. Date:

3. Rotation number:  1  2  3  4

4. Laboratory Rotation Advisor:

5. Rate your overall performance during this rotation:

   1  2  3  4  5
   Exceptional       Poor

6. Rate your overall ability to manage your time during this rotation:

   1  2  3  4  5
   Exceptional       Poor

7. Rate your time and effort spent working in the lab:

   1  2  3  4  5
   Maximum effort    Minimum effort

8. Rate your time and effort spent reading and learning about your project:

   1  2  3  4  5
   Maximum effort    Minimum effort
9. Rate your understanding of the research problem that you worked on:

1 2 3 4 5

Exceptional Poor

10. Were you able to make any independent contributions to your project? Explain:
(Examples: Introduce new ideas? Developed your own experiments? Contributed to data analysis?)

11. Rate your ability to learn new scientific techniques and approaches:

1 2 3 4 5

Exceptional Poor

12. Rate the quality and reproducibility of the data that you produced during your rotation:

1 2 3 4 5

Exceptional Poor

13. Rate your ability to organize your results:

1 2 3 4 5

Exceptional Poor

14. Rate the quality and completeness of your lab notebook:

1 2 3 4 5

Exceptional Poor
15. Rate your ability to interact and work with other lab members:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very well</td>
<td>Not so well</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. Rate your ability to interact effectively with the lab head:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very well</td>
<td>Not so well</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. Rate your ability to accept constructive criticism:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very well</td>
<td>Not so well</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Rate your time and effort preparing for your rotation report:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum effort</td>
<td>Minimum effort</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

19. Rate your rotation report performance:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceptional</td>
<td>Poor</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

20. Weaknesses
From the list above, what skills do you think are the most important for you to improve?
21. **Work environment**  
Give examples of things you did during your rotation to contribute to a positive work environment:

22. **Strengths**  
Provide examples of some of the skills that you are performing well.

23. **Work environment**  
Do you have recommendations for improving the work environment and rotation experience?

24. **Mentoring**  
Interactions with the lab head were:

   - Just right
   - Too frequent
   - Too infrequent
25. Would this be an acceptable lab for your thesis research?

   Yes
   No
   Maybe

26. Other comments:
Rotation Evaluation Report (Faculty)

Summarize your meeting with the student. Specifically comment on:

(1) Overall performance:

1  2  3  4  5
Exceptional  Poor

(2) At least two areas where the student demonstrated competency in their research efforts.

(3) At least two areas where the student could improve their performance.
(4) Any reservations that you may have about the ability of the student to conduct thesis research in your laboratory.

Faculty Advisor Signature / Date: 

_____________________________________________________

Student Signature / Date: 

_______________________________________________________
APPENDIX VII: THESIS RESEARCH PROPOSAL / WRITTEN COMPREHENSIVE EXAMINATION

In completion of the departmental written and oral exam requirements

All students must prepare a research proposal that meets the requirements of the “Research Training Plan” section of an NIH F31 grant application. Specific guidelines for preparing this proposal, as detailed in the F31 grant application guide, are attached below. Other specifics and a timeline for completing the proposal and oral exam are as follows:

May – September, Year 1: Student works full-time in their chosen thesis lab to generate the preliminary data and ideas for developing a research proposal. The mentor must work closely with the student in defining the research project to pursue. The student and mentor choose a committee of two additional faculty that will act as additional consultants for the student, reviewers of the written proposal and serve as members of an oral examination committee. These faculty members may come from within the BMB department or from outside the department. In any case, the students should choose their committee based on expertise of the research area and their suitability for providing an effective critique of the research proposal. This committee can be instrumental in helping the student prepare a proposal suitable for funding considerations, so choose the committee wisely. Over the summer the student should schedule the oral exam component of the proposal that should occur within the first two weeks of October (see below).

September – October, Year 2: The student writes the first draft of the proposal. The mentor is expected to play an active role in proposal development and coaching the student to write in a clear, concise, study section-friendly manner. The advisor should not write the proposal but provide guidance and feedback through several drafts.

October 15th, Year 2: The oral exam must be scheduled no later than Oct 15. Student must submit their proposal to the committee at least one week in advance of the oral exam. Students and/or the mentor are responsible for educating their committee as to the exam format as follows: The two committee members must read the proposal in its entirety in preparation for the exam. The mentor should attend the exam but will not ask questions. The exam will last approximately 1 hour. At the beginning of the exam, the student will give a short introduction explaining the rationale for the proposed studies. The two committee members will then lead the student through a discussion of the individual specific aims. The discussion can be used to test the student’s knowledge of the research areas and their ability to defend the proposed experiments. In addition, the discussion should include a full critique of the proposal by the committee, including a detailed discussion of what would be required to make this proposal ready for submission to an outside agency for funding. Suggested revisions should be summarized by the committee in writing in the “Exam Completion Form”.

October 15th – November 15th, Year 2: The student prepares a revised version (“A1”) of the proposal that addresses concerns and incorporates suggestions by the committee. The student prepares a 1 page “Introduction” to the proposal that addresses the reviewers’ concerns. The advisor should work closely with the student in assembling the Introduction and the A1. The A1 must be submitted to the committee no later than November 15th for review. Within two weeks, the committee members should either approve the revised proposal or, if necessary, request additional revisions. Following approval of the revised application, and satisfactorily completing the oral exam component, the student has officially passed the departmental written and oral exam requirement. The “Exam Completion Form” (attached below) should be signed by the committee members and returned to the Academic Coordinator.

Additional comments: This exercise is designed to help students prepare quality research proposals that can be submitted as fellowship applications for funding considerations. It is expected that a majority (but not all) students will choose to submit their proposals to the NIH and the exam requirement will be completed in time for the December 8th F31 deadline. Other students may choose alternative funding sources, but regardless, the exam requirements remain the same: A maximum 6-page research plan with separate Specific Aims Page as outlined below. Students seeking non-NIH funding sources should be able to re-format the proposal as needed to meet the specific agency requirements.
The reviewing committee should be considered as a continual resource for the student. Prior to submitting the fellowship for funding considerations, the student is recommended to solicit feedback from their committee on all aspects of the fellowship application including pages that address selection of sponsor and institution, description of research experience, etc.

### Timeline Summary

<table>
<thead>
<tr>
<th>Timing</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>May-September, yr 1</td>
<td>Define specific aims of the proposal, identify two committee members, generate preliminary data</td>
</tr>
<tr>
<td>September-October, yr 2</td>
<td>Prepare first written draft of the proposal</td>
</tr>
<tr>
<td>October 1&lt;sup&gt;st&lt;/sup&gt;-15&lt;sup&gt;th&lt;/sup&gt;, yr 2</td>
<td>Submit the proposal to examining committee, schedule and complete oral exam</td>
</tr>
<tr>
<td>October 15&lt;sup&gt;th&lt;/sup&gt; – November 15&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Submit revised proposal for review by the committee</td>
</tr>
</tbody>
</table>

### Guidelines for Preparing the Proposal

The Proposal should follow the format and guidelines of an NIH F31 fellowship. For information about the proposal purpose and eligibility, visit the [NIH F31 Individual Fellowships page](#). For information about preparing the proposal, from application instructions to guidance on writing your application, visit the [NIH Application Guide](#). Specific information about the Fellowship application’s Research Training Plan Section can be found [here](#).
Research Proposal and Oral Exam Completion Form
(To be completed by the most senior faculty member of the examining committee, excluding the thesis advisor; please return to the program coordinator at the completion of the exam)

Student’s name:

Thesis advisor / committee members:

PART I: Oral Exam and Preliminary Written Proposal

I. Exam date:

II. Result of oral exam (circle one): Pass / Fail

   If the student failed, please provide a detailed explanation.

III. Specific recommendations for revisions to the written research proposal:
PART II: Revised Written Proposal

I. Date of completion:

II. Result (circle one): Pass / Fail

If the student failed, please provide a detailed explanation.

Thesis committee member signatures:

______________________ (Advisor)

______________________

______________________

______________________
APPENDIX VIII: ANNUAL THESIS COMMITTEE MEETING FORM (STUDENT)

PhD Training Program

Annual Thesis Committee Meeting Form (Student)

Project Title

- Student name / PhD training program:

- Meeting date / date of last committee meeting:

- Year in which student entered the program / thesis lab:

- Thesis research advisor:

- Thesis committee members:

Accomplishments since previous committee meeting:

- Publications:

- Presentations:

- Teaching, mentoring and outreach:

- Course work:

- Fellowships submitted:

- Expected graduation date / timeline for completion:
**Project Description** (1-2 pages)

Introduction:

Summary of past progress:

Summary of current work and future studies:
Annual Thesis Committee Meeting Form (Faculty)

Student's name:____________________________________________________________

Date of meeting:_________

Thesis Advisor: ____________________________________________________________

Year of study:___________

Committee members in attendance:_____________________________________________

Please evaluate each of the areas below by circling the appropriate descriptor and also by providing comments where appropriate (to be completed by the student’s thesis advisor).

1. Progress since last thesis committee meeting (or qualifying exam if no prior meeting):

   Cause for concern to committee   Meets Expectations   Outstanding

   If cause for concern, please explain:

2. Does the student have a publishable story or at least the beginnings of one that could be completed within one year?

   Yes   Probably   Maybe No   Too soon to say
3. Should the student consider switching to a new project?

Yes   No   Too soon to say

Comments: if in doubt please describe additional experiments to assess the viability of the project

4. What specific goals should the student focus on to move the project to its next stage?

High priority experiments:

Investigation of new directions (recommended reading or consultation with outside experts, pursuit of potentially new techniques or approaches, etc.):

Others:
5. Is the student on track to graduating in under 6 years (from date of entry into the program)?
   Yes  Probably  Maybe  No  Too soon to say

6. When should the student have another committee meeting?
   3 months  6 months  9 months  12 months

7. Is the student ready to write his/her thesis and graduate? Does the committee agree with the
   student’s proposed thesis outline and plan for graduation (assuming it was presented)?
   Yes, means that it is the last thesis committee meeting and the student is being given permission to write
   up the dissertation and to schedule a thesis seminar date.
   Yes  No
   If no, please explain:

8. Any other comments:

   Advisor’s signature:_________________________________________

   Thesis committee member’s signatures:

   _______________________________

   _______________________________

   _______________________________
APPENDIX X: INDIVIDUAL DEVELOPMENT PLAN

INDIVIDUAL DEVELOPMENT PLAN FOR DOCTORAL STUDENTS AND POSTDOCTORAL FELLOWS

A. Information

Name: ____________________________________________

Circle or underline the one that applies:

Graduate Student/GS    Postdoctoral Fellow/PF

PI:____________________

Date of IDP submission:_______

B. Research Project(s)

• Describe the aims and experimental approaches of your current research project(s).

• What is the significance of your research?

C. Annual Progress Report

• List or briefly describe major research accomplishments this year (do not include publications or presentations here):

• List new techniques/expertise acquired this year:

• List references for publications submitted or published this year. List references for abstracts that were presented at meetings. In each case, underline your name in the author list.

• List your funding source(s) and grants applied for this year. Describe your visa status if appropriate:

• List honor/awards received this year:
• List intellectual and/or technical collaborations established or continued this year:

• List accomplishments this year in other aspects of career development (e.g. teaching, clinical, committees, course work, etc.). Include mentoring of graduate students, undergraduate students, etc. in the laboratory:

• Describe and explain your level of satisfaction with your research progress in the past year?

• Describe and explain your level of satisfaction with other aspects of your career development in the past year?

D. Plans for Up-Coming Year

• Research Project Goals for the up-coming year (be brief):

• What are your plans for improving your scientific writing skills and your oral presentation skills in the up-coming year?

• Anticipated research techniques to learn in the up-coming year:

• Anticipated publications to submit in the up-coming year (indicate projected titles):

• Anticipated meeting and workshop attendance in the up-coming year:

• Fellowship or other funding applications planned for the up-coming year. Describe your plans to alter your visa status if appropriate:

• Anticipated collaborations to establish in the up-coming year:

• Anticipated other professional training for the up-coming year (e.g. teaching, course work, etc.):
• How can your PI help you achieve your goals for the upcoming year? What do you want/need from your PI/mentor?

• [Question for Mentor] How can the graduate student/postdoctoral fellow improve performance and achieve his/her goals for the upcoming year? Have you and your trainee reviewed all of the expectations outlined in the “mentoring commitments document? Were any concerns raised during the discussion? If yes, explain.

E. Career Goals

• What are your short-term career goals? Describe your timeline for achieving them?

• What are your long-term career goals? Describe your timeline for achieving them?

• In reference to your career goals, what resources can your PI provide or help you find?

• What further research activity or other training is needed before it is appropriate to start a job search/postdoc search?

• When will you begin a job/postdoc search? If you do not know, estimate.

F. Discussion of JHU Mentorship Commitments of Faculty Advisors and Postdoctoral Fellows/PhD Students

• Have you and your mentor reviewed all of the expectations outlined in the “mentorship commitments” document?

• Were any concerns raised during the discussion? If yes, explain.
APPENDIX XI: ACADEMIC PROGRAM MILESTONES CHECKLIST (Class of 2021)

STUDENT NAME: ________________________________ MATRICULATED: ___ / ___ / _____
ADVISOR: ________________________________

PhD Program Core Curriculum Requirements
The Bloomberg School of Public Health’s “Satisfactory Academic Performance Policy” requires doctoral students to maintain a minimum GPA of 3.0 and to obtain a B or better in required core program courses.

Required introduction to public health courses:
Complete all of the listed PH.552.XXX courses (0.5 credits each) before the end of year 2:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Date Completed</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH.552.601</td>
<td>Foundational Principles of Public Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.552.602</td>
<td>Role of Quantitative Methods in Public Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.552.603</td>
<td>Role of Qualitative Methods &amp; Science in Population Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.552.604</td>
<td>Causes and Trends in Morbidity &amp; Mortality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.552.605</td>
<td>Primary, Secondary &amp; Tertiary Prevention Population Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.552.606</td>
<td>Critical Importance of Evidence in Advancing PH Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.552.607</td>
<td>Essentials of Environmental Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.552.609</td>
<td>Psychological &amp; Behavioral Factors Affect Population Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.552.610</td>
<td>Social Determinants of Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.552.611</td>
<td>Impact of Globalization on Global Burdens of Disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.552.612</td>
<td>Essentials of One Health</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

YEAR 1 required courses (complete a minimum of 16 credits per semester)

First Term:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Date Completed</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME.100.709</td>
<td>Analysis of Macromolecules (3 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ME.330.709</td>
<td>Organic Mechanisms in Biology (3 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.120.822</td>
<td>Seminars in Research in BMB (1 credit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.120.850</td>
<td>Biochemical Techniques (6 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.120.852</td>
<td>Current Research Literature (2 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.120.872</td>
<td>Current Topics in BMB (1 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.550.860</td>
<td>Academic &amp; Research Ethics Module (0 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Should be completed prior to Orientation]</td>
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<td></td>
<td></td>
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</table>

Second Term:

<table>
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<tr>
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<th>Course Title</th>
<th>Date Completed</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME.110.733</td>
<td>Principles of Genetics (3 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ME.260.709</td>
<td>Molecular Biology &amp; Genomics (3 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.120.822</td>
<td>Seminars in Research in BMB (1 credit)</td>
<td></td>
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</tr>
<tr>
<td>PH.120.850</td>
<td>Biochemical Techniques (6 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.120.852</td>
<td>Current Research Literature (2 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.120.840</td>
<td>Special Studies and Research/BMB (variable credits)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Third Term:
- ME.110.728 Cell Structure and Dynamics (3 credits)
- ME.360.728 Pathways and Regulation (3 credits)
- PH.140.615 Statistics for Laboratory Scientists I (4 credits)
- PH.120.822 Seminars in Research in BMB (1 credit)
- PH.120.850 Biochemical Techniques (6 credits)
- PH.120.852 Current Research Literature (2 credits)

Date Completed _______ Grade _____

Fourth Term:
- PH.120.624 Cancer Biology (3 credits)
- PH.120.630 Fellowship Grant Writing (2 credits)
- PH.120.822 Seminars in Research in BMB (1 credit)
- PH.120.850 Biochemical Techniques (6 credits)
- PH.120.840 Special Studies and Research/BMB (variable credits)

RECOMMENDED (optional)
- PH.140.616 Statistics for Laboratory Scientists II (4 credits)

Date Completed _______ Grade _____

YEAR 2 (Complete a minimum of 16 credits per term)

First Term:
- 550.600 Responsible Conduct of Research (1 credit)
- OR 305.665 Research Ethics & Integrity*

*Required prior to preliminary oral exam

Date Completed _______ Grade _____

Check off each box as you complete the course

<table>
<thead>
<tr>
<th>Course</th>
<th>1st Term</th>
<th>2nd Term</th>
<th>3rd Term</th>
<th>4th Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH.120.820 Thesis Research Biochemistry (11 credits)</td>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>PH.120.822 Seminars in Research in BMB (1 credit)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>PH.120.840 Special Studies and Research/BMB (4 credits)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

OTHER PhD PROGRAM MILESTONES

☐ Year 2 departmental thesis proposal/oral exam

Date___________

☐ Year 2 practice Preliminary Oral Exam (POE)

Date___________

☐ Year 2 Preliminary Oral Exam (POE)

Date___________

☐ Thesis Committee Meetings – Meet at least once a year after POE

Date___________

Date___________

Date___________
☐ Completed 64 credits of didactic coursework  Date verified ______
☐ Final Oral Defense & Thesis Seminar  Date ______________

THESIS TITLE

______________________________________________________________

Cumulative GPA _____________ Date GPA Entered _____________ PhD Conferral Date_______
## APPENDIX XII: PROGRAM FACULTY PRECEPTORS

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree(s)</th>
<th>Rank</th>
<th>Primary Department or Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bailey, Scott</td>
<td>BSc/ PhD</td>
<td>Associate Professor</td>
<td>Biochemistry &amp; Molecular Biology, SKCCC</td>
</tr>
<tr>
<td>Berger, James</td>
<td>PhD</td>
<td>Professor</td>
<td>Biophysics &amp; Biophysical Chemistry, SKCCC</td>
</tr>
<tr>
<td>Bibee, Kristin</td>
<td>MD/ PhD</td>
<td>Assistant Professor</td>
<td>Dermatology</td>
</tr>
<tr>
<td>Cai, Danfeng</td>
<td>PhD</td>
<td>Assistant Professor</td>
<td>Biochemistry &amp; Molecular Biology</td>
</tr>
<tr>
<td>Casero, Robert</td>
<td>PhD</td>
<td>Professor</td>
<td>Cancer Genetics &amp; Epigenetics, SKCCC</td>
</tr>
<tr>
<td>Caterina, Michael</td>
<td>MD/ PhD</td>
<td>Professor</td>
<td>Neurosurgery</td>
</tr>
<tr>
<td>Culotta, Valeria</td>
<td>PhD</td>
<td>Professor</td>
<td>Biochemistry &amp; Molecular Biology</td>
</tr>
<tr>
<td>Drummond-Barbosa, Daniela</td>
<td>PhD</td>
<td>Professor</td>
<td>Biochemistry &amp; Molecular Biology</td>
</tr>
<tr>
<td>Elisseeff, Jennifer</td>
<td>PhD</td>
<td>Professor</td>
<td>Ophthalmology, SKCCC</td>
</tr>
<tr>
<td>Ewald, Andrew</td>
<td>PhD</td>
<td>Professor</td>
<td>Cell Biology, SKCCC</td>
</tr>
<tr>
<td>Fertig, Elana</td>
<td>BS/ MS/ PhD</td>
<td>Associate Professor</td>
<td>Oncology, SKCCC</td>
</tr>
<tr>
<td>Gerecht, Sharon</td>
<td>PhD</td>
<td>Professor</td>
<td>Chemical Biomolecular Engineering, SKCCC</td>
</tr>
<tr>
<td>Gilkes, Daniele</td>
<td>MS/ PhD</td>
<td>Assistant Professor</td>
<td>Oncology, SKCCC</td>
</tr>
<tr>
<td>Green, Rachel</td>
<td>PhD</td>
<td>Professor</td>
<td>Molecular Biology &amp; Genetics</td>
</tr>
<tr>
<td>Hamacher-Brady, Anne</td>
<td>PhD</td>
<td>Associate Professor</td>
<td>Molecular Microbiology &amp; Immunology</td>
</tr>
<tr>
<td>Hicks, Stephanie</td>
<td>PhD</td>
<td>Assistant Professor</td>
<td>Biostatistics</td>
</tr>
<tr>
<td>Jaffee, Elizabeth</td>
<td>MD, PhD</td>
<td>Professor</td>
<td>Immunology/GI Clinical Research/Oncology, SKCCC</td>
</tr>
<tr>
<td>Jordan, Phil</td>
<td>PhD</td>
<td>Associate Professor</td>
<td>Biochemistry &amp; Molecular Biology, SKCCC</td>
</tr>
<tr>
<td>Kavran, Jennifer</td>
<td>PhD</td>
<td>Assistant Professor</td>
<td>Biochemistry &amp; Molecular Biology, SKCCC</td>
</tr>
<tr>
<td>Kinzler, Kenneth</td>
<td>PhD</td>
<td>Professor</td>
<td>Cancer Genetics &amp; Epigenetics, SKCCC</td>
</tr>
<tr>
<td>Name</td>
<td>Degree(s)</td>
<td>Rank</td>
<td>Primary Department or Program</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------</td>
<td>-------------------------</td>
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</tr>
<tr>
<td>Klein, Sabra</td>
<td>PhD</td>
<td>Professor</td>
<td>Molecular Microbiology &amp; Immunology</td>
</tr>
<tr>
<td>Laiho, Marikki</td>
<td>MD/PhD</td>
<td>Professor</td>
<td>Radiation Oncology &amp; Molecular Radiation Sciences, SKCCC</td>
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APPENDIX XIII: BMB TEACHING ASSISTANT (TA) POLICY

Biochemistry and Molecular Biology – TA Policy

Teaching Assistant (TA) positions provide students with an opportunity to develop their teaching and interpersonal skills, to work professionally with faculty and fellow students, and to contribute service to the department. In addition, TA service is considered a key element of our educational programs. As a result, all PhD students in their second year or third year are required to serve as a TA for one BMB directed course. A list of currently available courses is attached below. Although the teaching assistantship is a requirement, remuneration in the form of a travel grant will be awarded at the end of the term of the course for which you are serving as a TA.

The Academic Office will work with students and faculty teaching each course to identify a TA for that particular course. The faculty may opt to select one of their second- or third-year trainee otherwise, the staff in the Academic Office will provide a list of eligible trainees, with indicated course preferences, from which a faculty member may select.

Any PhD student or Postdoc who wishes to serve as a TA in a voluntary capacity may do so. Those who are interested should contact the Academic Office, and we will include you among the list of eligible TAs is circulated to the faculty. Moreover, the Academic Office may send an email to all PhDs and Postdocs requesting them to consider serving as a voluntary TA. Trainees wishing to serve as a TA in a voluntary capacity must receive approval from their advisors before serving as a TA for a course. For both the required and voluntary TA positions, 40 is the minimum number of hours that a TA is required to work per position, while the maximum number of hours worked per position may not exceed 55.

Students may not concurrently be enrolled in a class and serve as a TA for that class. TA’s must also be students in good academic standing in order to serve in this capacity regardless of whether the TA position is to fulfill the PhD program requirement or is voluntary. Moreover, all TAs for a BMB course must first complete the self-paced, online course, Teaching Assistantships I: Essential Elements. You will need to verify completion of the course with the Academic Office prior to the start of the course for which you are serving as a TA. The Academic Office will maintain record of your completion. Please note that you will receive remuneration for the course if this this requirement is not met. If you have completed this course and are volunteering to serve as TA for an additional course(s), you will not need to complete this training. The completion of Teaching Assistantships II: Interactive Methods is highly recommended for students who wish to develop their knowledge and skills as Teaching Assistants. Students who complete both courses will receive a certificate of completion. In addition, the Teaching Academy offers PhD students and post-doctoral fellows college teacher training and academic career preparation opportunities through courses, workshops, teaching practicums, teaching-as-research fellowship appointments and individual consultation. Trainees interested in improving their teaching skills are able to participate in any of the Teaching Academy trainings on an ad-hoc basis. However, those interested in committing more fully to their professional development and teaching preparation may opt to complete the full Certificate of Completion Program.

Roles and Responsibilities Teaching and Course Assistants:

TAs perform a very important role in the department. While they are not responsible for teaching entire courses, their support is integral the courses taught within the department. The department also values the
educational and learning experience that a student TA will gain through participation in this role. The Learning Objectives for this experience are tied to the core program competencies.

Learning Objectives:
1. Enhance knowledge base of current biochemistry, molecular biology, and cellular physiology
2. Enhance understanding of how to design, implement, and evaluate graduate level biomedical and public health courses
3. Develop and demonstrate breadth of knowledge in biomedical sciences and in public health
4. Communicate the results of scholarship and research clearly and professionally
5. Apply skills in written and oral communication in engaging with students in the course

The TA will complete the appropriate paperwork and file with the Academic Office – this includes a confidentiality agreement that TAs are required to strictly adhere to; for remuneration for the TA position, weekly timesheets are to be submitted to BMB’s Human Resources Coordinator.

Students are not expected to complete all of these tasks for any one course, but should work directly with the course instructor their assigned areas of responsibility prior to beginning work on the course. Completion of tasks are not to exceed 55 hours for the term.

- Course Preparation and updating on CoursePlus
- Revising syllabus
- Selecting/revising readings (new and supplemental, websites)
- Developing handouts (with faculty)
- Updating assignments/group work projects (with professor)
- Updating and/or formatting professor’s lectures (with professor or independently)
- Coordinating guest lecturers
- Attending class sessions (if deemed necessary by professor)
- Reading assigned readings
- Proctoring exams
- Monitoring course discussion boards and participating in discussions
- Leading discussion or review sections onsite and/or online
- Emailing updates to students
- Responding to student emails
- Holding office hours
- Track/monitor classroom/live chat attendance
- Manage drop boxes
- Serve as CoursePlus Resource
- Facilitate online course content (i.e. voice threads, Adobe Connect, Twitter)
- Grading papers/exams/assignments (limited to multiple choice questions and/or short answer questions to which a key/rubric has been devised by professor; essay questions should be graded on a very limited basis and should also have a rubric accompanying them)
- Creating grading distribution.

**Please note the department adheres to the current academic standard for full time students which limits the number of work hours per week to 19.9. We ask that Instructors and TA’s work within this weekly limit.**
**TA hourly timesheets should be obtained from the BMB administrative office (E3132). Each TA must complete the timesheet and submit hours weekly. The course instructor will sign off each timesheet and they should be returned to the BMB administrative office before noon each Friday. The office will track the hours submitted for each TA and course and contact both the student and instructor if the hours submitted for the TA is approaching the 55-hour maximum. Should the TA reach the 55-hour maximum before the end of the term, the Academic Office will be notified and the TA’s access to the CoursePlus site for the course will be removed.

If you have any questions regarding this policy, please contact the Academic Program Administrator.

BMB Directed Courses (click on course number to visit the JHSPH course system page; login required):

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<th>Title</th>
<th>Term</th>
<th>Instructor</th>
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<td>120.604</td>
<td>Concepts of Molecular Biology</td>
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<td>Scott Bailey/Anthony Leung</td>
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<td>120.601</td>
<td>Biochemistry II</td>
<td>2nd</td>
<td>Randy Bryant</td>
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<td>120.603</td>
<td>Molecular Biology of Pandemic Influenza</td>
<td>2nd</td>
<td>William Wright</td>
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<td>Cellular Stress in Physiology and Disease</td>
<td>4th</td>
<td>Jiou Wang</td>
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<tr>
<td>120.608</td>
<td>Gene Editing, therapy and Manipulation</td>
<td>3rd</td>
<td>Scott Bailey</td>
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<tr>
<td>120.610</td>
<td>Introduction to Biochemistry: Protein Structure and Enzyme Catalysis</td>
<td>1st</td>
<td>Randy Bryant</td>
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<tr>
<td>120.610</td>
<td>Introduction to Biochemistry: Protein Structure and Enzyme Catalysis</td>
<td>4th</td>
<td>Randy Bryant</td>
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<td>120.613</td>
<td>Nucleic Acid Chemistry</td>
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<td>Fundamentals of Reproductive Biology</td>
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<td>120.622</td>
<td>Molecular and Cellular Mechanisms of Reproduction</td>
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<td>Cancer Biology</td>
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<td>Principles of Cell Biology</td>
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<td>Stem Cells and the Biology of Aging and Disease</td>
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